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THE
FLORICULTURAL
C A B I N E T,
AND
FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1838.

VOLUME VI.

CONDUCTED BY MR. JOSEPH HARRISON,

NURSERYMAN,

DOWNHAM NURSERY,

NORFOLK.

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PREFACE.

DURING the past year the taste for gardening, particularly Floriculture, has made rapid advances, and the very extensive circulation of Monthly Periodicals on Floriculture, as well as other works on Gardening, have very considerably increased the stimulus to these delightful pursuits.

The continued increase in the circulation of the Floricultural Cabinet, is a gratifying assurance that our efforts have been approved, and it is with great pleasure that we are now enabled to supply complete sets from its commencement.

Our endeavours have been to obtain Figures of the newest and best plants of recent introduction, and to give the earliest information of such, and where they may be obtained, with all particulars we could collect respecting them. In order to effect this, and to obtain a knowledge of the best way of managing any ornamental plants, &c. we have very frequently visited all the public nurseries in the vicinity of London, and elsewhere, as well as private establishments, in order to collect useful facts, that they might be inserted in the Cabinet.

Many of our correspondents have, from time to time forwarded questions on Floriculture which have been inserted, with a view to obtain answers to them. When an immediate one has been required, we have attended to it soon after, but when expressed in a general manner for our Readers, we have judged it best to let it stand over, so that other opinions might be furnished. We shall at all times be glad if our Readers will thus favour us, and on a reperusal of back Num-

bers many queries will be found requiring answers. We are fully assured many of our Readers have it in their power to give useful and practical replies, and we do most respectfully ask their aid. It is our intention to commence answers to all past queries in every former Number that have not had answers, and such to be embodied in every future Number.

A monthly notice of all new Works on Gardening and Reviews, and remarks on every thing published in them, or in monthly and quarterly publications on Floriculture, will be given every month.

We again beg to record our grateful acknowledgments to our Friends who have so kindly contributed the valuable and interesting information, which we have had the pleasure to insert in the present Volume. We most respectfully solicit their continued co-operation. Some persons are deterred from communicating information, because the subject they are so familiar with does not appear of the interest it has in reality. Whatever is an improvement, however small, we shall be glad to be entrusted with them, and we will present them in a form that will be creditable to the author as well as ourselves, and thus contribute to make the Cabinet still more useful and valuable in proportion.

Downham, November 20th, 1838.

THE
FLORICULTURAL CABINET,

JANUARY 1st, 1838.

PART I.
ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTURE OF THE DAHLIA.

BY MR. ARTHUR BARBER, GARDENER TO THE HON. MAJOR LEGGE, BLACK-
HEATH, KENT.

THE very great respect I have for the manner in which your extensive Cabinet is conducted, has prevailed upon me to submit a course of treatment with regard to the culture of the above-named plant, (the Dahlia); by doing which, perhaps, it may not be amiss to its many readers, first to elucidate a little of its botanical name, and then to treat of its culture.

In regard to its botanical name, we find, on having reference to works which have been conducted by some of our most distinguished cultivators, that it was given in honor of Dahl, a Swedish botanist, but as it appeared that this name had previously been given to a very different plant, botanists changed the name to Georgina, in honor of Lady Holland, who, in 1804 reintroduced the plant after it had been considered lost for upwards of fifteen years; however the first name has become too general to be displaced, and a Mr. Don, a reputed botanist, takes upon himself to say it is correct.

In reference to its culture, I trust the following observations will not be found objectionable, as they have been, I do assure you, made with great assiduity.

About the middle of the month of March I consider is the best time to begin propagating the Dahlia; take your roots, otherwise tubers, and insert them in pots according to the size of your tubers, so that they have about an inch and a half or two inches clear around them; then take some fine light mould, (taking care to have an inch or two of potsherds at the bottom of your pots, to give good drainage) say one half leaf mould, and the rest kitchen garden earth, with a small portion of sand added to it, incorporate them well together and fill your pots (after having placed your tubers in them) taking care that the crowns of the tubers are above the level of the soil, and place them in a moderate hotbed till they have issued shoots two or three inches in length. (If a whole frame be used, I would recommend about three inches of sandy soil to be sifted over the dung, on which the tubers are to be laid, and covered with similar soil, also taking care to leave the crown of the tuber above the level of the soil, and also that the heat be not too violent, and when watered, to sprinkle them with warm water.) At this time have in readiness some pots eight inches in diameter, and an equal quantity four inches in diameter, so as when the one is placed in the other, there shall be two inches distance or thereabouts from circumference to circumference. After you have got your pots ready, take care to have plenty of potsherds to lay at the bottom, two inches of them will not be too many, as it is very requisite, and a matter of great importance, to carry off that superfluity of moisture which is occasioned by the too frequent watering; after having put your potsherds in, proceed to put in your compost, let it be such as will not retain too much wet, and on the contrary, such, as will imbibe a sufficiency of moisture.

I have found the following compost to be of great utility in the propagation of the cuttings, namely, one half leaf mould, and the remainder kitchen garden earth and sandy loam, in the proportion of two of the former to one of the latter. After having placed corks in the bottom of the smaller pots, so as to make them water tight, put your compost into the larger pot, until the edge or rim of the smaller pot when placed in it, shall become level with that of the larger pot: after having done this, prepare yourself with a sharp knife, and detach the shoots that are fit, that is when they have attained the desired length, taking care to detach them under a joint, or you may take them off by your hand, tak-

ing care to leave as much of the woody fibres at the joint as possible, otherwise the part is apt to rot off, and insert them around the space between the pots, then place them again in the hotbed. You may keep a little water in the inner pot, which is very useful and requisite, for the pot being in a moderate degree porous, it distributes a degree of moisture to the cuttings, which is so very essential to their striking, and the water being of the same temperature as the bed, it may occasionally be used in watering them, and thereby prevent those fatal consequences which are apt to destroy cuttings when watered with cold water; care must be taken not to give the cuttings too much water, as it is apt to drive the plants into leaf and height, and consequently to retard and even diminish the flowering. If water, is given let it be to the roots only, when the sun is shining upon the plants, at other times it may be given over the leaves.

I make it a rule not to plant out Dahlias in the open ground before the end of May, or early in June, so as to escape injury from frost. By this period the cuttings are generally well rooted. The soil to grow them in successfully ought to be a sandy loam. If the natural soil of the situation is not of this kind, a compost should be prepared, I recommend the following. Take about one-fourth well rotted dung, one half light sandy loam, and the remaining one-fourth, peat or bog-earth with a small quantity of leaf mould and road grit added. These ingredients must be well blended together and dug in the soil, for some time previous to your planting them in it. After your soil is prepared, the holes should be made ready to receive the plants, which should be about three feet from each other. In separating the plants, turn the pots upside down, and give it a gentle tap on the edge of your frame, or on any other convenient place, so as to loosen them. Care must be that the fibrous roots are not injured by separating. Then place them singly in the prepared holes, pressing the earth gently to them, and draw a small circle around each, so that when you have finished planting and begin to water, the water must be allowed to settle moderately around them. Having your stakes ready varying in length according to the height of the plants, allowing two feet for insertion in the ground, place them about two inches from the stem of the young plant, if this is not attended to now, it will hereafter be somewhat difficult, owing

to the roots increasing and the insertion of the stakes at this period, would injure them. As the plants advance in height, take care that they have timely support, by tying the stems to the stakes with bass.

When the flower buds begin to appear, you must not let your plants lack moisture, if this is not attended to, your flowers will be very weak: indeed, from the first planting them out, they ought not to lack water. To have fine flowers you ought to divest the branches of the small side shoots, also of buds which appear to cluster, leaving no more than one bud on each stem; this is practised by Florists, whose flowers are for competition.

About this time you will begin to find yourself very much troubled with those unwelcome guests, the earwigs, by committing extensive ravages among the flower buds, indeed, I know of no other tribe of plants which they seem to crave after so much as the Dahlia, and if great care is not taken, by having recourse to some means or other to extirpate them, your prospects as far as regards their flowering, will be entirely blighted; for there cannot be a petal which comes within their reach, but evident signs of their ravages manifest themselves. I have had recourse to various methods, but found none so efficacious in diminishing them as the following. (Moreover, be it observed, that it is a practice with many to mulch the ground with stable litter, so as to create a continual moisture around the plants; this mulching I have found to be an allurement for the insects, for they will conceal themselves even in the pieces of straw, which to find, will be like looking for a "needle in a bottle of hay." If mulching be adopted, let it be that of cow dung, which will answer your expectations in every sense of the word.) 1st, Pots placed on your stakes, with a little dry moss or tow in them, and looked into early in the morning. 2dly, Tow placed round the flower stalks, the insects not liking to ensnare themselves in it; and, 3dly, Bean stalks placed by a piece of string, on the stems or stalks; also pieces of cane soaked in water that had previously some sugar dissolved in it, the earwigs being very partial to things that possess saccharine matter and a dark recess. With regard to taking up your tubers, which is a very important thing, let it not be done too early lest their not being sufficiently ripe, will cause them to shrivel or rot and die. Great care must be taken of the lower end of the stem where it joins the tuber,

and where the eyes are situated, from their chance of being nipped by early frost in October and November; to prevent this, about the end of September or beginning of October, get some dry straw, pease haulm, or dry stable litter (the earwigs being nearly extirpated about this time) and place it around the lower part of the stem. When taken up, they must be gradually dried before they are permanently put away; in doing this, take care to turn them so as all parts shall receive a portion of air, you may then place them in boxes, filled with sand or ashes, leaving the crowns uncovered, as though they were planted. Before putting them away, of course it will be requisite to label them, to prevent confusion when planting them in the spring.

I hope these preliminary remarks will be found to meet the approbation of those who may scan them in your truly useful Cabinet.

Nov. 4th.

A. B.

ARTICLE II.

DIRECTIONS FOR PRESERVING PLANTS IN FOREIGN COUNTRIES FOR A HERBARIUM.

THIS is a much simpler process than is generally imagined by those unpractised in it, and travellers have been often deterred from collecting specimens by the time and trouble required for preparing them in the way that has by many been recommended.

The chief circumstances to be attended to are, to preserve specimens of plants in such a manner that the moisture may be quickly absorbed, the colours as much as possible preserved, and such a degree of pressure given to them, as that they may not curl up in the time of drying.

For this purpose let a quantity of separate sheets of paper be obtained of a folio size. Common brown paper, upon the whole is the best, except the very delicate kinds, which require paper of a smoother and somewhat more absorbent texture. Blotting paper, however, especially in warmer climates, would absorb the moisture too rapidly, and by repeated damping and drying, would soon be rendered useless. Two boards should be provided, one for the top and the other for the bottom of the masses of papers.

For pressure at home, or when stationary for any length of time in a given spot, nothing serves better than a weight of any kind (a folio book, a large stone, &c.) put upon the topmost board; the great advantage of this is, that the weight follows the shrinking of the plants beneath.

Whilst travelling, three leathern straps with buckles should be procured, two to bind the boards transversely, and one longitudinally. It will be further desirable to have a number of pieces of pasteboard of the same size as the paper, to separate different portions of the collection, either such as are in different states of dryness, or such as are by their hard woody nature might otherwise press upon and injure the more delicate kinds. Thus provided, gather your specimens; if the plants be small, foot and stem; if large, cut off branches of a foot, or a foot and a half long selecting always such as are in flower, and others in a more or less advanced state of fruit.

Place them side by side, but never one upon another on the same sheet; and lay upon them one, two, or three sheets, according to the thickness of the plants, or their more or less succulent nature; and so on, layer after layer of paper and specimens, subjecting them to pressure.

As soon as you find the paper has absorbed a considerable portion of the moisture, (which will be according to the more or less succulent nature of the specimens, and the heat or dryness of the climate or season) remove the plants into fresh papers, and let the old papers be dried for use again, either in the open air, or sun, or in a heated room, or before the fire.

As to the spreading out of the leaves or flowers with small weights, penny pieces, &c. it is quite needless, the leaves and flowers are best displayed by nature in the state in which you gather them, and they will require little or no assistance with the hand, when laid out upon papers, to appear to the best advantage, especially if put on carefully when fresh gathered.

If the specimens cannot be laid down immediately on being gathered, they should be preserved in a tin box, or failing that, in a rush basket, where they will keep for a day or two if the atmosphere be not very much heated.

Some very succulent plants, such as Cacti, Semperviva, Seda, Orchideous plants which grow on trees, &c. require to have their specimens, plunged in boiling water for a few seconds before

they are pressed to destroy life, and thus accelerate the process of drying.

Plants with very fine, but rigid leaves as the Fir tribe and the heaths, and some with compound winged leaves, to prevent their leaves falling off, or their parts separating, may either be treated in the same manner, or dried in very hot paper, or by means of a hot iron.

In many cases, especially in warm climates, the traveller will find the process accelerated by exposing the parcel (hung up and properly secured) to the open air when the weather is favourable, and the circulation of air through it will be promoted if the sheets on which the specimens are laid be placed alternately back and edge. In tropical countries he will find it necessary to shift his specimens, at least once a day, and by changing them into hot paper, and crowding such specimens as are dry, he will be enabled to form a considerable collection in small compass, and in a very short time. Four or five shiftings will generally be sufficient to complete the process, which is ascertained by the stiffness of the stems and leaves, and by the specimens not shrinking when removed. They should then be placed between dry papers, and formed into parcels of moderate thickness, and either packed in boxes, or well secured as parcels covered with oil-cloth.

Palms having their fructification and leaves very large, can hardly be subjected to pressure; a few flowers should be pressed, and the whole cluster of flowers and fruit, as well as a leaf, may be simply dried in the air, and afterwards packed in boxes for transportation.

The greater number of Cryptogamic plants may be dried in the common way, mosses that grow in tufts, being separated by the hand. But both mosses and lichens, as they can at any future time be expanded by damping, may be dried by the traveller without pressure and put up either, each species separately or several together, in small canvas or paper bags, carefully marking the place of growth and the date when gathered.

If the fruits of plants are of a small size so as to be preserved in a herbarium, they should be gathered with the leaves and branches, as are the flowers; if of a large size they should be kept separate. Dry fruits demand on care, except that those which split into valves, should be tied round with a little pack thread. Pulps and fruits are only to be preserved in spirits, or

in pyroligneous acid, diluted in the proportion of eight parts of water to one of the concentrated acid. In all cases the separate fruits whether dried or preserved in a fluid, should have a number attached to them, referring to the flowering specimen of the plant. Seeds, whether for examination, or intended to be sown, should be gathered perfectly ripe, be put in brown paper bags, and kept dry in a box.

With the specimens of the fruits and seeds, there should be slips of paper, on which are to be written the uses, native name, and general appearance of the plants, whether herbaceous, a shrub, or tree, its sensible qualities, and the colour and form of the flowers; its situation, if dry, or damp, the nature of the soil, the elevation above the level of the sea, and the date when gathered.

As soon as a sufficient number of specimens are collected, no time should be lost in transporting them to their place of destination, since in warm climates especially they are liable to the attacks of insects. These attacks, which are often completely destructive of the specimens, may in many cases be prevented by pitching the boxes, and by putting in them, or in each parcel, cotton dipped in petrolium, spirits of turpentine, or small pieces of camphor, and the captain of the vessel should be particularly requested to keep them in a dry or airy part of the ship.

Specimens of the woods of from six to eight inches in length, the entire round of the trunk or branch of small, and segments from centre to circumference of the larger kinds, in both cases, with the bark, should also be preserved, not only of the more remarkable trees, but also of the woody climbers, which often exhibit peculiarities of structure highly interesting to the botanist. When specimens of woods are preserved, they should be marked with numbers, corresponding with the flowering branches of the tree in the collection of specimens; and when flowers cannot be obtained, a small branch with leaves or fruits should always be taken.

Gums, resins, and other remarkable products should also be collected, their uses, if known, noted, and reference made by numbers to the plants they belong to.

Useful and ornamental plants would of course form the most important part of such collections; but even the weeds of foreign and little known countries, the grasses ferns, mosses, lichens,

and sea weeds will prove extremely valuable to the scientific botanist.

London, Nov. 1837

J. B.

ARTICLE III.

SOME REMARKS UPON MR. MAJOR'S PAPER, Vol. V. p. 247-8.

BY JOHN ADEY REPTON, ESQ. OF SPRINGFIELD.

MR. JOSHUA MAJORS'S remarks on the pruning, thinning, &c. of trees in plantations are very just, and well deserving of notice, as is the choice of trees that are likely to remain where planted, and his recommendation to cut down from time to time such trees that are beginning to encroach upon each other.

In thinning out it is always advisable to preserve the outside trees of the woods or plantations, (which are generally the best) but more particularly to avoid taking away those trees that are most exposed to the cold winds, as they afford shelter to the inner trees.

It is difficult, I believe, to persuade nine out of ten persons to cut down an old tree, which like an old friend, in spite of all its deformities, are frequently cherished by the proprietor, but a man of considerable taste, or one who has a painter's eye, can have but little hesitation in condemning a deformed tree, and particularly when it happens to hide a fine group, or a distant prospect.

It is a vulgar opinion of country gardener's to say, that "if you cut down a tree, you can never put it up again," when the tree itself would be better away.

Mr. Major has strongly objected to the Italian black poplar, and the larch, as tending to overpower and injure the effect of the other trees in the woods. But the larch mixed with others I consider a handsome tree, and has a beautiful autumnal tint, but when too tall, it may be taken away if it should interfere with the general scenery. The great variety of the spruce firs, are very much admired when in a healthy state, and not too much crowded with other trees, they require (whether planted in groups, or as single trees) plenty of toe-room, and when mixed with other evergreen plants, are very desirable near a mansion during the winter months.

Mr. Major is decidedly against the Italian black Poplar, and

against other Poplars, to which I will add the Lombardy, that is, the Turin or Po-poplar (*Populus dilatata*), this tree my late father condemned in every place he visited, more particularly if planted in rows as they are frequently found; the chief objection to them is, their loftiness, they overpower every thing about them. I have myself condemned them in every place where I have had the honour of being consulted. In my professional visit to Prussia in 1822, I found the palace of New Hardenburg quite overpowered with a row of Turin Poplars, and having appealed to the good taste of Prince Hardenberg, he had them all taken down, and the building rose up with all its grandeur. The magnificent palaces of the king of Prussia at Berlin and Potsdam (each more than a thousand feet long) are most wretchedly depressed by the rows of Turin Poplars which appeared nearly twice the height of the buildings.

Having fully condemned the Turin Poplar, I will give one word in its favor, that is, it is useful in hiding any unsightly object, but at the same time, I would plant other trees for future effect, and when these trees begin to answer the purpose for which they were intended, we can then take away the Poplars, or perhaps leave a few of them with their heads taken off. I do not mean that these Poplars are to be planted in rows, but in irregular groups, and of different sizes. There is no general rule in laying out grounds, as every place requires a different treatment; but generally speaking, I by no means recommend planting the valleys, but on the contrary, to clear them of trees, and plant the hills.

Mr. Major concludes his observations by advising us by all means "to keep out the frightful object, the black Italian Poplar," to which I may add the same to the Turin Poplar, which disfigures the beautiful scenery of England. Yet upon visiting my friend Mr. Nicholas at Hammersmith, I set my face against the rows of Poplars in his grounds, but upon approaching those near the pond, I found the trunks large and magnificent, and may be truly admired, I think that if the heads of these had been taken off, they would have been very much improved.

There is a row of deciduous trees facing the Thames, and being allowed by Mr. Nicholas to take down one tree only, we obtained from the windows of the house, a fine view of the bend of the river.

ARTICLE IV.

A DESCRIPTIVE LIST OF CAMELLIAS.

BY CAMELLIE.

*Continued from Vol. V. p. 268.**ELEGANS Loudonensis*, double large light rose, good.*atro rubens*, double dark red.*Fairlea*, double dark red.*alba*, single white.*Futting*, double dark red, white spot, fine form.*Marmorata*, semi double red, very large.*Waldakii* single white.*Anemoneflora alba*, double white.*Ellenora*, double dark crimson red.*Gardenerii*, double white pink spot or stripe.*versicolor*, double dark red white stripe.*semiduplex*, semi double light red." *alba*, semi double white.*longifolia*, single long leaved red.*grandiflora*, single red, very large.*rosea*, double light red, very good.*speciosa*, double dark red, very fine.*rotundiflora*, single round leaved red.*rubricaulis*, semi double red white spot or stripe.*cardinalis*, double dark red.*carnea*, double flesh-coloured.*argentea*, single dark red*crassifolia*, double dark rose, very good.*Warratah purpurea*, semi double.*splendens*, semi double dark red,*Belle rosalie*, semi double dark red, large.*papaveracea*, single dark red, large.*rosa sinensis*, double light rose, good.*Knightii*, single dark red.*Gussonia*, double dark rose, fine.*coccinea*, semi double dark scarlet.*Brouayana*, double rose white spot, very fine.*sanguinea*, single blood red.

- Bedfordii*, double dark red, very good.
Conchiflora, double rose.
Viorneani, double rose white spot or stripe.
dilecta, double blood red, very fine.
Dorsetii, very double dark red, white spot or stripe, fine.
fulgida, semi double dark red.
Elphinstonii, very double dark red, fine
amabilis, single white.
Clintonia, double red and white spot or stripe, fine.
Simsii, single dark red.
minuta semi double, dark rose, small flower.
elegans, Chandler's double rose, very good.
Dianthiflora semi double red small white spots.
Dianthiflora carnca, semi double, flesh coloured.
rubro punctata, single red spotted,
Acubaefolia, semi double light red.

(To be continued.)

ARTICLE V.

OBSERVATIONS UPON THE DAHLIA.

No. II.

BY A STAR IN THE EAST.

My former communication having met with your approval by an insertion in the Cabinet, I again address you with observations No. 2, and am sorry I have not ere this had an opportunity to do so; during the interval another Dahlia season has terminated, and the character of the different kinds has been proved, and founded on the grower's own experience. The past season, has in general, I have the satisfaction to say, produced a marked improvement in our collections by the addition of many very superior flowers; and although numerous has been the deceptions practised upon the purchasers, by having false recommendations of the qualities of the sorts, I doubt of its being repeated as those persons who have had a little experience in the matter, will be more wary in future.

I have very frequently myself grown most of the seedlings sold out this year, and when in bloom I made notices of the qualities of each, that I might be guided upon their merits another season. I now submit to those readers of your Cabinet who are Dahlia growers, the remarks, judging it might be of use to a great part of them, and as the season is drawing nigh when the plants are sent out, I shall be glad to see its insertion in an early number.

December, 18th, 1837.

Girling's Ruby is a first rate show flower, defective in only being rather small and the colour not being sufficiently decided. It requires to be grown strong, and the branches well thinned away.

G. Suffolk Hero, is another superior flower, and like the above, indispensable to a collection.

G. Topaz, very fine colour, and moderately good for showing, but not to be depended upon.

G. Painted Lady, good formed flower and prettily laced, but too small for show.

G. Master Ransom, forms an improvement upon picta formosissima, from which I have no doubt it is a seedling,

G. Goliah, large, and not fit for show.

Jeffrey's Rosea Elegans, fine bright rose, very uncertain, but in its true character one of the best flowers in existence.

J. Sir Robert Harland, a large flower, generally appearing with notched petals, and rather deficient in colour, but may sometimes be obtained good enough to show.

Cameron's Shakespeare, quilled purple, dull colour, and only a poor flower.

C. Countess of Mansfield, moderate, sometimes appearing with a hard eye.

C. Duke of St. Albans, very paltry.

Squibb's Shakespeare generally comes most beautifully shaded orange and red, the flower is not full enough for a small stand, but will be found very useful in a 24 or upwards.

S. Mary of Little Park, is very pleasing in colour, but, large, wide, and ugly in form.

Bristol Perfection, very dark, uncertain, and the flower rather too thin, but occasionally fine.

B. Vicar of Wakefield, is only moderately good, too flat, and the back petals completely fall, before the flower is expanded, and the colour is dull.

Gaines's Ada, a large blush flower, moderately good, but too thin and flat for a stand of less than 36.

G. Countess of Jersey, petals too much involuted to form a show flower.

G. Brilliant, similiar but worse than the last.

G. Sergeant Talfourd, is too much quilled, and though of a pretty colour, the blooms are too tender to carry to an exhibition.

Barnes's Rival Queen, a very neat formed flower, but not of the right stamp to qualify it for competition with our prize flowers.

B. Regulator, is much too starry and hard in the eye, ever to obtain approval.

Salter's Ion, trash, have grown two plants of this, neither of which has produced a double flower.

Harding's Mary Queen of Scots, is very good when perfect flowers can be obtained, which is seldom. It requires to be grown strong and well cut away.

Foster's Australia, is a crimson red frequently shaded, rather too thin of petals around the eye, but may sometimes be introduced as a show flower.

F. Beauty of Kingscote, is a splendid large light flower with a deep and regular lace of crimson purple, and though rather flat in form, no collection should be without it.

F. Eva, is one of the best flowers grown, almost every bloom produced being perfect, and I have no doubt it will be in great demand the coming spring.

F. Kingscote Rival, a fine bright pink coloured flower, the petals are rather pointed, and is rather too flat in form, notwithstanding which, it is a good flower.

Knight's Lady Webster, is very uncertain, curious colour, and oftentimes coming with an open eye, but when good the form is unique; it will only come in as a front row flower in a stand, in consequence of being rather small.

K. Victory, a bold deep crimson flower, not cupped, but of very superior form, nearly always coming full and fine; all who have seen it, holds it in high estimation.

Diadem of Perfection, light rosy crimson, beautiful form, but rather small.

Thompson's Rival, beautiful shaded light crimson and dark, finely cupped, but often the flowers are disfigured, with a hard green eye.

Faulkner's White Perfection, is an improvement upon Mrs. Wilkinson, which it much resembles both in colour and form.

Springfield Rival Major, is a fine large deep crimson flower, though not equal to Knight's Victory.

General Gomez, a disgrace to the grower who sent it out.

Dray's Anacreon, only fit for growing to please the curious.

D. Blandina, rather small and somewhat inferior to others of the same class.

D. Coriolanus, light purple, moderately good formed, but rather too flat.

D. Glory of the West, is the best of this person's seedlings, I find it rather difficult to procure a good bloom, now and then however it is beautiful, in which state it is decidedly the most superior in its class.

D. Goldfinder, is similar to Blandina, small and inferior to several others of the same class.

D. Lord Ashley, deep purple, flat, and only very moderate.

D. King Harrold, a very large and indifferent flower.

Harrison's Agnes de Castro, is distinct and striking. The blooms are frequently not full enough, but occasionally a show flower may be obtained.

Widnall's Lady Dartmouth is very uncertain, but when obtained in its true character, beautiful.

W. Juliet, a good showy flower, but somewhat uncertain.

W. Marchioness of Tavistock, a pretty good flower when caught in perfection, and an improvement upon Royal Adelaide, like it however, it is too flat.

W. Victoria, a very neat and pretty flower, but almost too small for showing.

W. Sir W. Scott, an improvement upon *Picta formosissima*. but the petals are so much pointed as to disqualify it for exhibition.

Barratt's Stuart Wortley, is a light purple, uncertain, and though not first rate is a pretty good flower.

Striata perfectd, complete trash.

Wilmer's Queen's superba, is exceedingly uncertain, generally appearing with the fatal disfiguration of an open eye; now and then it may be obtained very fine, in which state it is the best yellow that has come under my notice.

Elphinstone's Conqueror of Europe, a very good flower, occasionally its principal fault is, so frequently coming full of florets, and the flower not being quite full enough; notwithstanding, it is indispensable to a collection.

E. Miss Elphinstone, is rather too much quilled, and too flat, but a good flower.

E. Rosa superba, deep rose, good.

E. King of Beauties, paltry.

E. King of the Yellows, very fine bright yellow, good show flower, though not first rate.

E. Purple Perfection, now and then very good, but exceedingly uncertain.

E. Queen of Trumps, beautiful colour and neat flower, but unless grown very strong too small for showing.

E. Mrs. Broadwood, similar to the latter, small, and requires to be grown strong.

E. Marquis of Northampton, is a very fine full show flower, but from being somewhat uncertain, it should be divided into three plants and sown early by which means a first rate bloom may almost at any time be gathered, no collection should be without it.

Elliott's Berkshire Champion, is a beautiful dark flower frequently shaded with light purple, almost always appearing perfect, and is one of the most unique flowers grown. On account of the flowers inclining to be rather small it requires to be grown rather strong, and I understand very few people has had the good fortune to possess it, consequently the coming season will bring a great demand for it.

Harris's Miss Harris, is a curiously suffused light purple and white flower, but not fit for show.

Melbury Rival, large crimson, only moderate.

Mayle's Beauty of Bedford, most beautiful shaded purple, and may sometimes be obtained good enough for show, although not of first rate form.

Lane's Sir John Sebright, very uncertain but occasionally pretty good,

(To be continued.)

REVIEW.

The Rose Amateur's Guide. By T. Rivers, Jun. containing ample Description of all the fine leading varieties of Roses, regularly classed in their descriptive Families, their history and Modes of culture; in Two Parts. Part I. The Summer Rose Garden. Part II. The Autumnal Rose Garden.

Every person who takes an interest in this beautiful tribe of plants, ought to procure this very interesting book. It contains a description of a number of the best Roses in each particular class, with some judicious remarks on their culture. It is divided into two parts. Part I. includes remarks upon the following classes of Roses.—

The Provence Rose, The Moss Rose, The French Rose, Hybrid Provence Rose, Hybrid China Roses, Rosa Alba, The Damask Rose, The Scotch Rose, The Sweet Rose, The Sweet Briar, The Austrian Briar, The Double Yellow Rose. CLIMBING ROSES, The Ayrshire Rose, Rosa Multiflora, The Evergreen Rose, The Boursault Rose, Hybrid climbing Roses.

Part II. Perpetual Roses, The Bourbon Rose, The Chinese Rose, The Tea-scented Chinese Rose, The Miniature Rose, The Noisette Rose, the Musk Rose, the Macartney Rose, Rosa Microphylla, an abridged list of Roses.

We have selected the Remarks upon one class of the Summer Rose Garden, and one from the Autumnal Rose Garden, that our Readers may form an estimate of a Work so well worth possessing.

HYBRID CHINA ROSES.

“The superior varieties of this fine division give a combination of all that is or can be beautiful in roses, for not only are their flowers of the most elegant forms and colours, their foliage of extreme luxuriance, but their branches are so vigorous and graceful, that perhaps no plant presents such a mass of beauty as a finely grown hybrid China rose in full bloom. They owe their origin to the China, Tea-scented Noisette and Bourbon roses, fertilized with the French Provence, and other summer roses, and also to the latter crossed with the former; the seeds of such impregnated flowers producing hybrid China roses. These have, in many cases, resulted from accident, but latterly from the regular fertilizing process, as mules or hybrids have been raised from well known parents.

In England, but few varieties have been originated: as the common China rose does not in general ripen its seeds sufficiently for germination. The parents of Brown's superb blush, which is an English hybrid, raised by the late Mr. Charles Brown of Slough, one of the most scientific and persevering cultivators, cut off in the prime of life, was the old tea-scented rose, Rosa

indica odorata, impregnated with some hardy summer rose. Rivers's George the Fourth is also an English rose; but as this came by accident, its origin is not so well ascertained. *Rosa Blairii* is also English, and raised from the yellow China, impregnated with some variety of hardy rose. All the roses have the true characters of the family; leaves smooth, glossy, and subevergreen; branches long, luxuriant, and flexible. They give a long continuance of bloom, but they never put forth secondary or autumnal flowers. This is a most peculiarly distinguishing trait, and an interesting fact. Impregnate a Bourbon, China, or Noisette rose, all abundant autumnal bloomers, with the farina of a French or Provence rose, and you entirely take away the tendency to autumnal blooming in their offspring. They will grow vigorously all the autumn, and give a long, but not a secondary series of flowers. Some of these hybrid China roses, produce seed abundantly, which is rather a remarkable feature, as so few hybrid plants are fertile.

Hybrids produced from the French rose impregnated with the China rose, are not of such robust and vigorous habits as when the China rose is the female parent; but perhaps this is an insertion scarcely borne out by facts, for the exceptions are numerous, and, like many other variations in roses and plants in general, seem to bid defiance to systematic rules. By some cultivators the roses of this division have been much more divided than in my catalogue, forming "Hybrid Noisettes," "Hybrid L'Isle de Bourbons," &c. &c.; but all these owe their origin to the common China rose, their offspring may with justice be called hybrid China roses.

Those who have been raised from noisette roses have a tendency to produce their flowers in clusters; those from Bourbon roses have their leaves thick, leathery, and round; those from the tea-scented have a delicate and grateful scent; but all have those distinguishing family traits as before given, and accordingly they group beautifully. As this is the grand object of the amateur cultivator, it seems far more preferable to arrange them as one family, than to make several divisions with but very minute distinguishing features. It is a difficult task to point out the best in this division, as they are nearly all well deserving of cultivation. However, by making a few remarks, such as cannot be given in a descriptive catalogue, I may perhaps be able, in some measure, to direct the choice of amateurs to those most worthy their notice.

Adolphe Cachet is a rose not much known; but a very double, well shaped and distinct variety. *Melaine de Bourbon*, the *Athelin* of some French catalogues, is a hybrid Bourbon rose, scarcely double enough, but exceedingly beautiful. It has finely shaped flowers, and blooms in large and erect clusters; its colour is of that vivid rose so peculiar to the Bourbon roses. As this bears seed freely, it will probably be the parent of numerous fine varieties. *A fleurs marbré* is a small, but very brilliant marbled rose, one of the prettiest of this division. *Adele Ancelin* is a most delicate coloured and beautiful rose, very perfect in its shape, and distinct in character.

Bonne Geneviève. This rose, under the name of "*Beauté ethereal*," and described as "purple margined with crimson," has been sold extensively. It is a most beautiful and perfectly imbricated rose. *Brennus*, the *Brutus* of some collections: this very superb rose, will form a finer object as a pillar rose or standard, than as a blush; its luxuriant shoots must not be shortened too much in winter pruning, as it is then apt to produce an abundance of wood, and but very few flowers. This rose, often puts forth branches in one season from eight to ten feet in length; if these are from a dwarf, and are fastened to a wooden or iron stake, and not shortened, the following season they will form a pillar of beauty but rarely equalled. *Blairii*, a rose not so much known as it deserves to be, is a very distinct and unique variety, so impatient of the knife, that if pruned at all severely, it will scarcely put forth a flower: it is perhaps better as a pillar rose, than grown in any other mode, as it shoots ten or twelve feet in one season, and its pendulous clusters of flowers which are produced from those long shoots unshortened, have

a beautiful effect on a pillar. Beauty of Billiard is, of all roses, the most glowing and beautiful: its colour is described in the catalogue as scarlet; but it is rather a fiery crimson, so vivid that it may be distinguished at an immense distance. This rose also requires care in using the knife; the extreme tips of the branches may be cut off, and some of them thinned out; it will then bloom in great perfection, but care must always be taken in winter pruning to leave its shoots nearly their full length. Becquet is a pretty distinct dark crimson flower, very double and well shaped. Belle Marie is a first rate rose, finely shaped, and a good show rose. Belle Parabere is a very remarkable variety of inconceivable luxuriance; its flowers are very large; it will in good soils, as a standard, soon form a large nmbrageous tree. Belle de Rosny is a hybrid noisette, blooming in very large clusters, of first rate quality. Catel is one of our finest dark roses, very double and finely shaped, quite worth the notice of the amateur. Coccinea surperba, or "Vingt-neuf juillet," is a rose alike beautiful in its flowers and foliage; in early spring its leaves and shoots are of a most vivid red, and this appearance they retain the greater part of the summer; its flowers are brilliant in the extreme, crimson purple shaded with scarlet: the shoots of this rose must also be left at nearly their full length.

Coupe d'Amour richly deserves its name, for it is a beautiful neat rose, quite perfect in its form and colour.

Coronation is one of those purple shaded roses, inclining to slate, imbricated, and very perfect in its shape. Chatelaine is a hybrid Bourbon rose, dove coloured, finely shaped, and very good. Coutard may be safely recommended as a most perfect and good rose, flowering with great freedom, and beautiful either as a dwarf or standard. Colonel Fabvier, also a sterling good rose, is remarkable for its delicate fragrance. The Duke of Devonshire is an imbricated rose, one of the great favourites of the day, and most deservedly so, for its rosy lilac petals are so delicately striped with white, and its shape is so perfect, that it will always be admired. Duc de Choiseul is not a new variety; but as it is between the China and Provence rose, which is a species of hybridisation not very common, it is interesting; it forms a very fine standard. Duc de Choiseul punctuee, or the spotted, is a most distinct and pretty variety; this makes long and slender shoots, and is well adapted for a standard. Daphne is a hybrid Bourbon, and one of the most beautiful of roses: it has the brilliant colour of that interesting group, and the fine foliage, but its flowers are much ~~more~~ double than the generality of Bourbon roses. Dr. Guepin is a most perfect shaped, globular rose, quite distinct in its character; this, with a few others, which will be noticed in their turn, have beautiful spherical-shaped flowers, singular and pleasing. Eugene Barbet is also one of these finely formed roses, with dark purplish crimson flowers of first rate excellence. Elizabeth Fry is a hybrid noisette, blooming in large clusters, a most brilliant and pleasing rose. Fulgena, or the Malton rose, is certainly one of the most brilliant and beautiful of roses; the entire plant is also worthy of admiration, independant of its magnificent globular scarlet flowers, as its foliage is so abundant, and so finely tinted with red; its branches so vigorous, and yet spreading so gracefully, that it forms one of the very finest of standard roses. Fleurette offers quite a contrast in its small delicately coloured, and finely shaped flowers, it is a desirable and pretty variety. Fimbriata is a most curious and beautiful rose: each flower leaf is cut something like the petals of a pink, and as it is imbricated, it looks more like a large self-coloured carnation than a rose. General Lamarque is one of the darkest of roses, a most luxuriant grower, and very distinct: in wet weather it is apt to lose its colour, and to change to a dull brown."

PART II.

LIST OF NEW AND RARE PLANTS,

*Noticed since our last.*1. BOUSSINGAULATIA BASSELOIDES. *Bacella-like* [Bot. Mag. 3620.

CHENOPODEÆ. HEXANDRIA, MONOGYNIA,

A native of South America, near Loxa, in the Quintinian Andes. Mr. Tweedie sent it to the Glasgow Botanic Garden from Buenos Ayres. It is a very desirable hothouse plant. The root is fleshy and knotted, much in the way of the common border plant, Solomon's Seal, and each extremity throws up a rounded and branching twining stem. The leaves are fleshy, cordate, and at the lower part of the stem, are from four to five inches long. The flowers are produced on graceful racemes, each from three to five inches long, bearing numerous, greenish-white blossoms, which are highly fragrant. Each blossom is about a quarter of an inch across. The racemes of flowers are produced at the opposite of the leaves, and nearly every leaf is thus accompanied. The plant merits a place in every plant stove. It is very probable it would flourish well in a good greenhouse. Boussingault, a celebrated naturalist and traveller in South America.

2. ANIGOZANTHUS MANGLESII, var, ANGUSTIFOLIA. *Narrow-leaved.*
[Bot. Reg. 2012.

HEMERDACEÆ. HEXANDRIA MONOGYNIA.

A native of the Swan River, from whence it was sent by Sir James Stirling to R. Mangles, Esq. The variety is distinct from the beautiful *A. Manglesii*. It differs in having much narrower leaves and smaller flowers, which are rather of redish orange, colour at the base an entire green; these being covered with feathery hairs, which have a pretty effect. The plant is an herbaceous perennial, the flower stems rise about a foot high, each plant is of easy culture, but in order to succeed well, it requires to have a small portion of chalk mixed with loam and peat. It is not very tender, only requiring the protection of a frame in winter. *Anigozanthus*, from *anistho*, I rise up, and *anthos*, flower.

3. COSMUS TERMIFOLIUS. *Fine leaved.* (Bot. Reg. 2007.

ASTERACEÆ. SYNGENESIA SUPERFLUA.

Another interesting and handsome flowering annual from Mexico. Seeds of it had been presented to the London Horticultural Society, by G. F. Dickson, F. H. S. in the garden of the Society, it has recently bloomed. The flowers are more than two inches across. The disk is yellow, the petals are of a fine rosy purple, and make a very showy appearance. The beauty of the foliage is very striking having a fennel-like appearance, and with it the flowers make a fine showy contrast. The plant grows to about two feet high. When the seeds are sown late in the spring, the plants usually bloom so late in autumn that seeds can rarely be obtained, but by sowing very early in spring in pots, and transplanted out, they bloom early and ripe seeds may be gathered. Or if sown late in summer in pots, and be preserved in a cool frame or Greenhouse through winter, such plants turned out early in spring will succeed best, and bloom through a great part of the sea-

son, and its beauty will amply compensate for such attention to its culture. *Cosmea*, from *kosmos*, beautiful, in allusion to its appearance.

4. *DOMBEYA CANNABINA*, *Hemp Dombeya* (Bot. Mag. 3619.

BYTTNERIACEÆ. MONODEPHIA POLYANDRIA.

A native of Madagascar, and was sent home by the late Charles Tell-fair Esq. to the Glasgow Botanic Garden. The plant has much the habit and appearance of *Astrapœa Wallichii*. It has the less spreading petals and the long staminal tube of *Astrapœa*, but the inflorescence and the absence of involucre of *Dombeya*. The plant bloomed for the first time in the stove at the Glasgow Garden in 1837. The flowers are produced in a corymb of many closely placed flowers, which are white, having a large staminal tube, twice as long as the flower; it is white, with a tinge of red. *Dombeya*, in Compliment to Joseph Dombey, an eminent South American traveller.

5. *CAMPANULA BARBATA*, var. *CYANEÆ*. *Dark blue-bearded Bell flower*. (Brit. Flow. Gard. 409.

CAMPANULACEÆ. PENTANDRIA MONOGYNIA.

This variety was raised from seeds in the apothecaries garden at Chelsea, where it bloomed last July. It is peculiarly distinguished from the more ordinary state of *C. barbata* by its dark blue flowers, the usual colour of the original species being a pale blue, and occasionally milk white. The plant varies too in bearing one or more flowers on a stem. Each flower is upwards of an inch long, and the mouth of the corolla about three quarters of an inch across. The stems rise to about nine inches high. It is a very pretty flowering variety.

6. *DRACOPHYLLUM CAPITATUM*. *Round headed flowers*. (Bot. Mag. 3621.

EPACRIDÆÆ. PENTANDRIA, MONOGYNIA.

A very pretty greenhouse shrub; a native of New Holland. It grows about half a yard high, with erect twiggy branches, similar to the *epacris*'s. The flowers are produced in terminal heads, they are of a pure white, each head contains eight or ten blossoms, and each blossom is about a quarter of an inch across. It is a neat and pretty flowering plant. It is cultivated in the Glasgow Botanic Garden. *Dracophyllum*, from *drakos*, draco, and *phyllum* a leaf, from the resemblance of the leaves to those of *Dracœna Draco*.

10. *HIBISCUS LILACINUS*. *Lilac coloured Hibiscus* (Bot. Reg. 2009.

MALVACEÆ. MONODEPHIA POLANDRIA.

A native of the Swan River, from whence seeds were sent into this country by Sir James Stirling, to R. Mangles Esq. Sunning Hill, Berkshire. The appearance of the plant is very different to the species long grown in the gardens of this country. The leaves are filiform, parted. The flowers are single, about three inches across, of a pretty lilac colour, whitish towards the base of the petals. It will thrive well in the open ground during summer, but it is probable it will require protection during winter.

8. *PHILIBERTIA GRANDIFLORA*. *Large flowered*. (Bot. Mag. 3618.

ASCLEPIADEÆ. PENTANDRIA DIGYNIA.

Mr. Tweedie sent seeds of this very handsome flowering plant from Buenos Ayres to the Glasgow and Dublin Botanic Gardens, where it has recently bloomed. It is likely to succeed well in the greenhouse, and would be one of the most ornamental of greenhouse climbers.

PART III.

MISCELLANEOUS INTELLIGENCE.

—
QUERIES.

ON HEARTSEASE DYING.—Having for two or three years past grown a few varieties of this lovely tribe, now such a general favourite. I will feel obliged if you or any of your correspondents could inform me from what cause it is that so many of the plants in my bed this last July went off with some peculiar disease; the plants even when in full bloom, assuming a black appearance, gradually growing yellow, and dying away; nor upon lifting them, in this state, could I discover any worm or other insect at the root. I may mention that I have grown them successfully for two years and they bloomed very well upon the same spot. Could this be the reason of their failure this season? an early answer will much oblige your constant subscriber.

COLYCINTH,

ON DAHLIA FLOWERS.—I have in my garden about forty or fifty Dahlias of pretty fine kinds, but being a new grower, I would esteem it a favour if some reader would answer the following query—I observe in almost all my plants three buds to shoot out from one branch and conclude that two of them should be taken away, leaving the third to flower. Therefore should the bud so left be the middle or centre one, which I think is invariably in a more forward state than its companions, or will the buds on each side of it produce finer flowers, and consequently one of them kept. TREE BLUE.

REMARKS.

NEW PLANTS.—*Chrysanthemums*. We visited the nursery of Messrs. Chandler's nursery, Vauxhall, to see the splendid show of *Chrysanthemums*, which very far exceeded our expectations, being most strikingly beautiful. We subjoin the following list of what we saw:

Queen.—Light rose, flower double, moderate size, early.

Marquis. Light pink, flowers double, large and in clusters, early.

Triumphant. Pink and buff, large, early.

Bicolor. White and yellow, flowers small, very double, dwarf, early.

Chancellor. White and pink quilled, flowers large and incurved, late.

Formosum. Incurved white, with lemon coloured centre, early.

Lucidum. Incurved white, early.

Enchantress. Incurved creamy white, flowers large, late.

Spectabile. Quilled white, early.

Gem. White with pink tips, early.

Vesta. White, flowers very round, cupped petals, early.

Marchioness. White, with a little pink on the outer petal, early.

Coronet. Clustered white, round petals, early.

Imperial. Incurved French white, flower large, early.

Eminent. Light pink, incurved, late.

Compactum. White, flowers small, very double, late.

Goliath. Yellowish quilled white, very large, incurved, early.

Conspicuum. Crimson, flowers very large, semi double, early.

- Insigne.** Pink and red, early.
Magnet. Yellow, flowers rather small, a little quilled, early.
Elegans. Lilac, flowers rather small, very regular, late.
Surprise. Paper white, flowers large, early.
Invincible. Reflexed creamy white, large, very double, late.
Mirabile. White, buff tint, compact flower, dwarf, early.
Diadem. Quilled white, early.
Perspicuum. Quilled Pink, flowers large, late.
Angelina. Straw colour, quilled, late.
Rosalind. Quilled pink, early.
Calypso. Dark rose, flowers small, early.
Defiance. Silvery white quilled and incurved, late.
Decora. Rose, flowers large, early.
Virginia. Quilled white, early.
Flavescens. Lemon coloured, flowers small, early.
Eclipse. Incurved paper white, late.
Adonie. Clustered pink, a little quilled, early.
Pulcherrimum. Rose, white tips, very double, late.
Victory. White large reflexed white petals, dwarf, early.
Celestial. Rosy white flowers compact, dwarf, early.
Cleopatra. Pink and buff, early.
Unique. Light pink twisted petals, early.
Glory. Large paper white, flat petals, late.
Grandia. Flesh colour, large flat petals, early.
Empress. Tasselled pink, flowers large, late.
Hero. Rose, flowers large, late.
Eximium. Rose, flowers round, rather small, early.
Aurantium. Quilled orange, early.
Rival. Light rose, incurved semi double, late.
Adventure. Bright yellow, early.
Sulphureum. pale yellow, flowers in clusters, early.
Penelope. Buff, flowers round, semi double, early.
Venus. Light rose, with red eye, flowers small, early.
Diana. Quilled white, late.
Conqueror. Large French white, flat petals, early.
King. French white, flowers large incurved, late.
Striatum. Light rose and red striped, late.
Champion. Reflexed lemon colour, large flat petals, late.
Countess. Creamy white, large, semi double, late.
Grandissimum. Incurved white, late.
Perfection. Incurved lilac, flowers large, late.
Aurora. Purple, flowers large and quilled, late.

Phytostegia truncata. This new hardy herbaceous plant, is much like the *Drawcocephalum* genus, the flower stalks rise about half a yard high, producing numerous flowers of a pretty rose colour, spotted in the inside with red. It is well worth a place in the stove or garden, Mr. Young, of Epsom possesses the plants.

Impatiens scapiflora. A new stove species of Balsam from Ceylon, the flowers are of a delicate rosy-lilac colour, very different in appearance from the common Balsam; and are produced in profusion, having a neat and elegant appearance. It has bloomed for the first time in this country (we are informed,) at Mr. Young's of Epsom.

Convulvulus Pintestum. A new hot house species, which we saw in bloom at Mr. Bow's, Clapton Nursery, the flowers are rather small, of a bright blue colour, and are produced in vast profusion. It deserves a place, as a climber in every collection of stove plants.

Loasa aurantiaca. We saw this new and handsome flowering species in

bloom at Mr. Young's, Epsom. It is a greenhouse plant of a fine habit, the flowers are more than an inch across, of a fine deep orange colour; produced in abundance, and hang in a very graceful manner. It is a fine autumnal flowering plant, well worth a place in every greenhouse.

Nemophila atomaria. A new species now in bloom in the greenhouse at Mr. Young's, Epsom, the flowers are not so showy as *N. insignis*, but are very pretty, they are white delicately spotted with blue.

Cboizema Manglesii. This fine new species is in bloom at Messrs. Rollinsons, Tooting Nursery. The plant is of a very fine luxuriant habit, much more so than *C. ovata*; and the flowers, though of the same colour as that species are much larger, making a very showy appearance. It well merits a place in every greenhouse.

Thunbergia lutea. This new and pretty flowering species we saw in bloom at Mr. Low's, Clapton nursery, the flowers are about the size of *T. alata*, of a paler yellow colour, without a dark eye. It is a neat and interesting species well worth growing.

Verbena Aranana—named in compliment to the Earl of Arran. This beautiful plant proves a great addition to that already interesting tribe, it is decidedly more shrubby than *V. Tweediana*, the blooms are of a bluish purple colour. It originated from seeds sent by Mr. Tweedie, from Buenos Ayres, to the Edinburgh and Dublin Botanic Gardens.

Passiflora. A fine hybrid variety, is in bloom at Mr. Knights Nursery, Kings Road. It has been raised between *P. princeps*, and *P. alata*. The flowers have the graceful form &c. of the former, and are of a beautiful cream colour. The plant has the vigorous habit of the latter species. It is a valuable acquisition, and when grown in contrast with *P. princeps* will produce a pretty effect.

REFERENCE TO PLATE.

Clintonia pulchella. This very neat and elegant little annual is a native of California, where it was discovered by the late Mr. Douglas. Seeds of it were sent to the London Horticultural Society, and since have been liberally distributed through the country. It is a hardy annual, ripening its seeds freely. The plant grows procumbent, rising about six inches high, and producing a profusion of bloom. It is very neat for a small bed, edging for a bed, rock work, or in patches in the general mixture of a border. It deserves a place in every flower garden. Seeds may be obtained of most Seedsmen.

Glycine Harrisonia. A greenhouse plant of extraordinary beauty. The flowers are produced in long racemes, of ten or twelve on each. Each blossom is, at least, three times the size of those figured, our limits not allowing a figure of the full extent. The blossoms at first are white and violet, afterwards changing to yellow and brown.

The plant grows very rapidly, climbing to the extent of twenty feet in a season, and producing a profusion of flowers. When trained under a roof as the vine, the blossoms hanging in abundance, have a beautiful appearance. They are delightfully fragrant, perfuming for some distance around. We do not know the native country of the plant, a seed of it had been sent to a friend of ours, who presented us with the plant. We shall have a number for sale in the course of this spring.

Clatonia pulchella



THE FLORICULTURAL CABINET,

FEBRUARY 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTURE OF HYACINTHS.

BY MR. JOHN FYFFE, GARDENER, MILTON BRIANT RECTORY.

THE Hyacinth may well be esteemed as one of the finest hardy bulbs that adorn the flower garden, the tulip may surpass it in its gaudy robes and tinsel show, but the Hyacinth not only gratifies the eye with its rich and delicate spike of flowers, but charms the beholder with its rich and delicate perfume. The following is the mode which I have practised very successfully in growing the Hyacinth; it may not be new to some of your numerous readers, but it is a sure and certain way to procure fine spikes of flowers provided the bulbs are good, and to others the remarks may be of service.

The compost I use is of the following proportions, one part of vegetable mould, one rotten cow dung, one sand, and one light loam, having them well mixed.

The bed is filled to the depth of two feet, keeping the centre of one foot above the surface of the pathway, which allows all superfluous moisture to escape.

The bulbs are planted in white sand to keep them from rotting before they start.

They are greatly benefitted by being covered with three or
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four inches of leaf mould, or short dung from an old hot bed, which protects them from injury by frost, and enriches the soil. If, however, severe frosts sets in after the bulbs appear above the covering of dung, I protect them with hoops and mats.

By the above mode of treatment I have flowered the same bulbs a second season, with an equally good show of flowers.

J. FYFFE.

ARTICLE II.

ON GRAFTING THE DAHLIA.

BY MR. WRIGHT, WALWORTH.

It happens not unfrequently, that the tubers of Dahlias either have no eyes, or the crown has become so hard and woody, that the young shoot cannot force its way through it. Unless the shoots, for example, slipped off from the tubers in the spring, have attached to their lower extremity a number of incipient buds, indicated by the extremity appearing convex, while the part it was taken from is concave, the new tubers formed during the summer will often be what the gardeners term blind; for though large and fully formed, they are merely attached to a hollow stem, and will not break the following season. This is prevented by taking care to have the slip taken with a convex extremity, or a piece of the tuber attached.

When tubers are found to be blind, the eyes or buds of fine sorts, of which the supply is limited, may be advantageously grafted upon them; picking them out with a grafting knife, so as that a small piece of the original tuber remain attached. On the neck of the blind tuber, cut a notch to receive this bud or eye, which is to be inserted so that the base of the bud be exactly on a level with the surface of the tuber. It is to be fixed in this position with grafting wax. The grafted tuber is then planted in a pot, kept under a glass, and treated like an ordinary cutting. It is scarcely necessary to remark, that the graft bud must not be buried, but left above the surface of the mould in the pot.

When the plants have been forwarded in any of the modes above described, so as to have healthy stems, they may be planted out for flowering about the end of May or the beginning of June, but it is better not to be too early; for one night's frost may do them irreparable injury.

C. WRIGHT.

ARTICLE III.

OBSERVATIONS UPON THE DAHLIA.

No. II.

BY A STAR IN THE EAST.

(Continued from page 16.)

Miss Hortense, Yellow distinctly tipped with white, very remarkable, but not fit for show.

Miss Cook, Cupped red, rather too small for show,

Harding's Metropolitan White, is not a cupped flower, but moderately good, and ought to be grown.

Kington's Incomparable White, which, although very pure in colour and cupped, the flower not sufficiently full.

K. Maid of Judah, a pretty good flower, always well up in the centre.

K. Victorious, very poor and starry.

K. Magnet, only moderate at its best

K. Malibran, similar to the last.

K. Nimrod, fine cupped show flower, best of its class, and also of Kington's seedlings.

Forsyth's Vestal Bride, uncertain, but sometimes pretty good.

Rhoda, small, but pretty flower.

Countess of Longford, very pretty laced purple on a yellow ground, requires to be grown in a rich soil.

Agnes Graham, small and paltry.

Addison or *Louthianum*, a splendid cupped show flower, richly shaded, and indispensibly necessary to every collection.

Seale's Cleopatra, white, a little pointed, but very good.

Nulli Secundus, a dazzling scarlet and good show flower.

Dod's Mary Queen of Scots, sometimes a hard eye, occasionally a good show flower, but not, however, equal to Dod's Mary.

Young's Robert Ruist, a bold re-flexed show flower.

Harding's Duchess of Montrose, rather too flat, petals sometimes notched, and colour not decided, but notwithstanding these imperfections, it is a good show flower.

Stanford's Rival Scarlet, a good show flower.

Brahmin Superb, uncertain, but occasionally first rate blooms are to be obtained.

Hedlay's Golden Sovereign, large re-flexed bright yellow, only very moderate.

Lady of Oulton, petals involuted, only moderate flower.

Pamplin's Middlesex Rival, very good show flower, large and generally to be depended upon.

Etonian, is somewhat uncertain, but very good in its best character.

Mountjoy's Carmine Perfection, very neat and good show flower

Jackson's Lady de Roos, a very neat flower.

Whittle Harvey, large loose flower.

Gil Blas, bronze, a good flower

Skirving's Duchess of Sutherland, uncertain, from sometimes appearing with a hard eye, but now and then very fine and first rate.

Rival Sussex, a very good flower, first rate.

Lounde's Bianca, white, of middle size, good flower

Doctor Hawtry, large cupped flower, moderately good, but will not do for a small stand.

Charles Kenrick, good for nothing.

Metropolitan Purple, moderate, but rather too starry.

Brown's Quilled Perfection, occasionally very fine, but very uncertain and rather too much quilled.

ARTICLE IV.

A DESCRIPTIVE LIST OF CAMELLIAS.

BY CAMELLIA.

Continued from p. 11.

Floyii, semi double fine red, very large, like *reticulata*, extra.

Rosea, double, very light red foliage, like *myrtifolia*, (new var from China.)

Imbricata alba, double white with red spot or stripe, fine form.

Kermocina, double dark red, good.

Superbissima, double carmine, white stripes, extra fine.

Fasciculata speciosa, flesh colour, white stripe or spot, extra.

Corperii, double white, red spot or stripe, good.

Jussieu, double light rose, cupped petals, fine form.

Gilesii, double dark red with white spot or stripe, extra fine.

- Variabilis*, double rose, blush or white, sometimes flowers, of all the three colours on the plant at the same time.
- Expansa*, semi double, dark red.
- Blanda*, double blush, Warratah form.
- Epsomensis*, semi double, light red.
- Brownii*, double dark red, large and fine.
- Excelsia*, Rollinson's, double clear white.
- Anemoneflora carnea*, double flesh colour.
- " *rosea*, double light rose.
- " *striata*, double red, white spot or stripe.
- Spofforthiana rosea*, double light rose.
- Woodsii*, double light red, large flower, good.
- Eximia*, double fine red, beautiful form, extra fine.
- Ochroleuca*, double pale yellow, good form, extra fine.
- Nivalis*, double clear white.
- Punctata major*, double blush, red spot or stripe, large and extra fine.
- Concinna*, double fine rose, very good.
- Concolor*, double bright red, very good.
- Ignescens*, double bright red, large flower, fine.
- Frazera*, semi double, light red.
- Susanna*, double white, pink stripes, extra.
- Maculata*, semi double white, pink spots or stripes.
- Martha*, double blush with pink stripes, extra.
- Madieana*, double white, large flower, good.
- Ranunculiflora striata*, double red, white stripes.
- Compacta*, double white, good.
- Incarnata*, semi double, flesh colour.
- Gardineastrata*, semi double, pale white.
- Kellyana*, double light red, small white spots, very pretty.
- Smithii*, double light rose, very good.
- Alnutii*, double white, very large and good.
- Sabiniana*, double rose, very good.
- Pendula*, Cunningham's, double red, white stripes, extra fine.
- Coronata*, double light red, very good.
- Adelaidii*, double light rose, good.
- Pomponia*, double blush.
- Purpurescens*, single dark red, white spot.
- Pæoniaeflora*, double, very light red.
- " *alba*, double pale white.
- Sweetiana*, double rose, white spot or stripe, extra fine.

Beelii, double light red, beautiful form, petals cupped, extra.

Imbricata, double light red, sometimes with white spots, beautiful form, extra.

Perfection, *Palmer's*, double dark red, cupped petals, one of the finest Camellias known

(*To be continued.*)

ARTICLE IV.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

HAVING recently derived pleasure and profit from reading the Cabinet, I forward some observations on the Shrubbery for insertion therein, not doubting but the readers will derive some satisfaction in perusing them:—

“THE Shrubbery is a style of pleasure-garden which seems to own its creation to the idea that our sublime poet formed of Eden. It originated in England, and is as peculiar to the British nation as landscape planting. Whilst other arts have been derived from ancient, or borrowed from modern inventions, this has indisputably sprung from the genius of our soil, and is, perhaps, one of the most delightful, as well as most beneficial of all that claim the name of elegant.

Ornamental plantations are now so universally spread over the face of this country, that our island may be compared to a vase emerging from the ocean, into which the Sylvens of every region have set their favorite plants, and the Flora of every climate poured her choicest gifts, for the embellishment of the spot round which Neptune throws his fostering arms. Our ambition leads us to hope that we may add pleasure to the pleasure-ground, by pointing out the beauties of the shrubbery, which must render vegetation an object of admiration and veneration to all classes. I wish to attract attention to the peculiar pleasing properties of each plant, by the remarks of the ingenious, the anecdotes of the ancients, the harmony of the poets, the observations of the physicians, and the reflection of the moralists of all ages. Morality, however, of a gloomy cast will be avoided; for my wish is to give the work like the subject, a smiling aspect.

Though flowering shrubs seem to contribute nothing to potage, and little to Medicine in its present refined state, yet they add greatly to our pleasure, and considerably to our health.

They win us to good humour by their fragrance and cheerful appearance, and produce a serenity of mind by the calm reflections they present to it; thus relieving some of the maladies of the soul, as drugs mitigate the grosser and more perceptible sufferings of the body.

“ The spleen is seldom felt where Flora reigns,
The low’ring eye the petulance, the frown,
And sullen sadness, that o’ershade, distort,
And mar the face of beauty, when no cause
For such immeasurable woe appears :
These Flora banishes, and gives the fair
Sweet smiles and bloom, less transient than her own.”

COWPER.

I shall notice the allegorical allusions, which the eastern nations are accustomed to make by means of flowers, and the fables of the ancient poets and mythologists respecting plants. Thus pleasing ideas may be connected with pleasing objects, and agreeable images convey lively but moral sentiments to the mind, adding to the charms of the country without recourse to romance or useless fiction. These accustom the mind to such violent sensations, that at last it is obliged to resort to an excess of feeling, either of mirth or grief, to prevent that dreaded fashionable lethargy of spirit—*ennui*. Such a habit in the end injures health and consequently shortens life, but a calm and cheerful mind assists in the prolongation and enjoyment of both :

“ Come then ye blissful scenes, ye soft retreats.
Where life flows pure, the heart more calmly beats.”

DE LILLE.

It would seem, that the more terrible a sight, and the more violent an impression, the more agreeable to the great portion of mankind, who run with avidity after objects of horror, whilst they pass unnoticed those which produce gentle and agreeable sensations, and would to all appearance rather tremble at the awful thunderbolt of Jupiter, than calmly admire the beauteous horn of plenty. It has been observed that the Volcano near Naples attracts more travellers to the city, than the delicious

heite,) who in the midst of the splendour of Paris, regretting the simple beauty of his native island, sprang forward at the unexpected sight of a banana tree in the Jardin des Plantes, embraced it, while his eyes were bathed in tears, and exclaiming with a voice of joy, "Ah! tree of my country!" seemed, by a delightful illusion of sensibility, to imagine himself for a moment transported to the land which gave him birth.

We seem as it were for an instant to go back to the delights of infancy, when, on each succeeding spring, we visit the meadows covered with cowslips, which afforded us so many happy hours in childhood, as we formed balls of their blossoms. Then the playful girl, bedecked with wreaths and necklaces of daisies, led her little swain in chains formed of the milky flower stalks of the dandelion; but who at the sight of a butterfly burst the brittle bonds and scampered away, to return, perhaps, a few years after sighing, in fetters not so visible, but more binding.

There is no part of nature's works more interesting than flowers. They seem intended for the embellishment of the fair, and for the ornament of the spot where they tread. Their sweet perfumes have such influence over all our sensations, that in the midst of flowering shrubs the most acute grief generally gives way to sweetest melancholy. When our home and domestic companions are encompassed by the shrubbery, our situation approaches nearest to a terrestrial paradise. Is it not, then,

"Strange, there should be found,
Who, self-imprisoned in their proud saloons,
Renounce the odours of the open field,
For the unscented fictions of the loom;
Who, satisfied only with penciled scenes,
Prefer, to the performance of 'a God,
Th' inferior wonders of an artist's hand?
Lovely, indeed, the mimic works of art;
But Nature's works far lovelier."

COWPER.

The shrubbery is to a rational mind a source of inexhaustible delight and instruction, where each season brings new joy, and every morning a fresh harvest of delightful sweets. Subjects for new thoughts and contemplations prevent themselves to our view, and even the most dreary months still supply cause of admiration, and discover a world full of wonders; for,

" E'en Winter oft has seen it gay,
 With fretted frost-work, spangled o'er,
 While pendants drooped from every spray,
 And crimson bodlets told, once more
 That spring would all its charms restore."

It is not to old age alone, that the garden offers its placid delights. Every stage of life from the cradle to the grave is attracted by its charms. The infant is ready to spring from its nurse's arms, allured by the gay colours which flowers exhibit.

They form the most innocent toy of childhood, and the cultivation of them is generally its first labour, whilst their presentation often explains the passion of youth. The happy belle loves to entwine them in her locks, and the fond parents delight to see their child mimic their beauties with the pencil;

" The flowers that grace their native beds,
 Awhile put forth their blushing heads ;
 But e're the close of parting day,
 They wither, shrink, and die away ;
 But these, which mimic skill hath made,
 Nor scorched by suns, nor killed by shade,
 Shall blush with less unconstant hue,
 Which art at pleasure can renew."

The representation of flowers is the proper style of drawing for the softer sex. In this attempt they will succeed, and by this study will afford us delight which they cannot do, " when, o'erstepping the modesty of nature," and the limits of their proper employment, they present us with specimens of their proficiency in the science of anatomy. A pursuit like this is often too bold, and the subjects sometimes too masculine to suit the feeling of the other sex. But flowers are the peculiar province of the fair, and the nearer their imitation approaches to nature, the more it delights us ; which paintings of murders, massacres, deaths, and agony, certainly cannot. The beauty and grace that may be displayed in grouping flowers, united with the gaiety of their colours and the harmony of their tints, are well worthy the attention of those who were born to render life delightful. The neatness, nicety, and patience required in finishing flower-pieces, seem to demand the delicate hand of a female artist.

The description, by Moses, of the garden of Eden, the first abode of first created man, formed the outlines which Milton has so splendidly enriched with all the imagery of poetry. From

this have been copied the plantation, the park, and shrubbery, so justly the pride of the nation, and so properly the abode of its beauty. The Greeks devoted their terrestrial groves, as well as their celestial gardens, to the gods ; but the Mahometans reserve their flowery lawns and umbrageous bowers for scenes of future bliss to mortal believers. We, however, more prudent, should wish to collect all such blessings, which bounteous nature has scattered over the globe, and in this present life form a modern garden, worthy of the Hesperides, and deserving of, though not requiring a dragon to guard it.

Some of the pleasure gardens of antiquity were created for, and devoted to, the pleasure of the softer sex. Solomon has celebrated those of Jerusalem in song, and the extraordinary gardens of Babylon appear to have been formed by Nebuchadnezzar for his Median queen, who, we are told, could not become reconciled to the flat and naked appearance of the provinces of Babylon ; but frequently regretted each rising hill, and scattered forest which she had formerly delighted in, with all the charms they had presented to her youthful imagination. The king to gratify his consort, within the precincts of the city raised terraces and planted woods, in imitation of those that diversified the face of his queen's native country. Thus we are told originated those gardens, which for their singularity and comparative extent, were considered one of the wonders of the world. Their base covered four acres of land, and the height of them was so considerable that they resembled a pyramidal mountain covered by a forest. The upper area, which was about thirty feet square, was about three hundred feet distant from the river Euphrates, that washed the base of that stupendous superstructure,

This towering pleasure ground overlooked the whole city and surrounding country, as far as the eye could reach. Each terrace was covered with earth and planted with trees, so as to form a series of ascending groves : and every platform supported rural seats, fountains, and sumptuous banqueting rooms, on which all the splendour and luxury of eastern magnificence were lavished.

(To be continued.)

REVIEW.

The Rose Amateurs Guide. By T. RIVERS, JUN.

(Continued from p. 19.)

Rivers's George the Fourth is still, perhaps, one of the best of this family: it was raised from seed by myself, about twenty years ago, and contributed probably more than any thing to make me an enthusiastic rose cultivator. It is now much esteemed in France, where it is comparatively a new variety Grilony is a new and fine rose, of a purplish slate colour, and first rate form and character. Hybride blanche is a hybrid noisette blooming in clusters, and a pretty neat white rose a little tinged with rose colour. Hypocrate is a most superb variety, one of the finest of its class, and well adapted for a show rose. The King of Roses, or Saudeur panachée, is a rarity among hybrids, for it is finely striped, and as yet so few variegated roses are in this class; till this season (1837) never has it bloomed in perfection, or in fact scarcely at all, owing to its having been pruned too much: like some few others mentioned, its branches may be thinned, but scarcely at all shortened; this rose will form a fine pillar, and a standard of the largest size, as it grows with extraordinary luxuriance and vigour. Legouve is a hybrid Bourbon Rose, and quite first rate in form and colour: this may be grown for a prize or show rose. Lady Stuart, like the Duke of Devonshire, is a gem of the first water, for no rose can surpass it in beauty; the form of the flowers before expansion is spherical, and exceedingly beautiful. This rose for some years to come, must and will be a favorite. La grandeur is, perhaps, nearly as much to be admired, but for qualities quite opposite, as this is when quite open an imbricated rose, exceedingly regular and pleasing in its form. Las Casas is a hybrid Bourbon of the most robust habit, producing very large flowers, nearly the colour and shape of the common cabbage rose. Luusseldembourg is a fine spherical-shaped rose: its flowers are of a bright rosy lilac, very beautiful and distinct. Madame de Goursac is a hybrid noisette, blooming in immense clusters, and forming a very pretty standard. Monteau and Miaulis are both good dark roses; but they are certainly surpassed by Miralba, which has recently been named Cherrier: this is not a large rose, but decidedly one of the most brilliant and beautiful dark crimson roses we possess. Moyena, a bright purplish rose, has flowers very double and finely shaped; it will prove a good show rose. Ne Plus Ultra, the Palagi of two or three rose cultivators, and called also Gloire des Hybrides, is now an established favorite. Like many others of this division it is not at all adapted for a show rose; its flowers resemble in colour the red stock and are singularly brilliant.

Princess Augusta is an English rose, a vigorous grower, and well adapted either for a pillar rose or a standard. Petit Pierre is one of those rapid and diffuse growing roses, like Belle Parabere and the King of Roses in luxuriance and vigour of growth; this is one of the largest and the most double of hybrids, and when grown as a standard, forms a magnificent tree. Pomponne bicolor is rather a small, but well shaped rose, its centre inclining to scarlet, with outer petals of fine crimson purple, a most distinct and desirable rose. Reine de Belgique rivals Lady Stuart in the fine and perfect shape of its flowers; this rose has been sold for Reine des Belges, a hybrid Provence: but, as that is of the finest white, and this of a rosy lilac, the cheat is soon detected. Riego is between the China rose and the sweet brier, a remarkable, but most pleasing union, as it has the most delicious perfume. Rosine Dupont is a very pale flesh coloured rose, with remarkable glossy foliage, and erect growth, very distinct and pretty. Saphirine is one of the largest

globular roses known, and most astonishingly robust and vigorous in its habit: in a very few years, in a strong soil, this rose would form a tree of the largest size. *Souvenir d'une Mere* is a large rose, of that delicate but bright rose-colour, always so much admired. Its flowers are not so double as some other varieties; but very large and magnificent. *Triomphe de Laffay* is a beautiful rose, not of a pure white, but rather what is called French white, the outer petals inclined to rose colour. *Triomphe de Guerin*, a very large pale rose: much resembles *Lady Stuart*, differing only in having the centre of its flowers of a warm rose coloured tint: this is a most beautiful and distinct variety. *Triomphe d'Angers* is perfectly unique and no rose can be more deserving of admiration. Its perfume is much like ripe fruit, and its singularly brilliant crimson flowers are often striped with white; these two last mentioned varieties are finer grown as standards than in any other mode, as their flowers are large and pendulous. *Titus* is a remarkably pretty purple rose, blooming in large clusters. Its flowers are not large but finely shaped and very distinct. *Victor Hugo*, one of the finest of the lilac coloured roses, deserves a place in every collection. It produces flowers of the very largest size, globular, and finely shaped. This is a very erect growing rose, and may be cultivated either as a standard or a dwarf. *Velours Episcopal* is a new and beautiful variety, perfectly globular of a fine crimson purple, inclining to the latter colour. *Wellington* is now an old rose: for some time thought to be the same as *Bizarre de la Chine*, but now found to be quite different in its habit and growth, though its flowers have an exact resemblance.

With but few exceptions hybrid China roses may be cultivated as standards to advantage, as their growth is luxuriant and umbrageous; some of the most robust growing varieties forming immense heads. To keep them in a healthy state, lay round their stems, on the surface of the soil, in winter, a good proportion of manure; and mind that before the blooming season commences this is added to, as they require the surface of the soil moist when in flower; they will also continue much longer in bloom if this is attended to. The great objection to this summer surface manuring, with English gardeners, is its unsightly appearance, particularly round trees on well dressed lawns; this may be soon obviated, by covering the manure with some green moss: and to keep the birds from disturbing it, which they will do after worms, place on the moss some pieces of rock, or flints, thus forming an ornamental mound. In France, roses are cultivated with much and well rewarded care; for even standards of thirty years growth have, every spring a large quantity of manure laid on the surface round their stems. This keeps the extreme heat of the sun from penetrating to their roots; and as they are abundantly watered in hot weather, it also prevents that rapid evaporation which would otherwise take place, so often rendering watering useless; this practice after all is only imitating nature, for the Dog Rose, upon which all the fine varieties are grafted, grows naturally in woods and shady places; consequently, it is impatient of exposure in hot, dry soils and situations.

For rose beds on lawns, the roses of this division are finely adapted, as they form such a mass of foliage and flowers. They may also be formed into a regular bank, rising gradually from the edge, by having dwarfs of different heights, and "petites tiges," or dwarf standards in the back ground. They bloom remarkably fine on these little stems, and as the stem is protected from the sun by the branches of the plant, it increases in thickness, much faster than when taller: tall stems owing to exposure, are apt to become bark bound and unhealthy, increasing but slowly in girth, and often requiring support. To have hybrid China roses in perfection as pillar roses, they require attention, and a superabundance of manure; but they will amply repay it, for a column twelve to twenty feet high, covered with such roses as *Brennus*, *Blairii*, *Belle Parabere*, *Coccinea superba*, *Fulgens*, *Fimbriata*, *General Lamurque*, *George the Fourth*, *King of Roses*, *Petit Pierre*, or *Triomphe d'Angers*, &c. &c., would be one of the finest garden ornaments

it is possible to conceive. To make these varieties grow with the necessary luxuriance, each plant should have a circle three or four feet in diameter to itself, and if the soil is poor, it should be dug out two feet in depth, and filled up with rotten manure and loam. This compost must be laid considerably (say two feet) above the surface of the surrounding soil, so as to allow for settling: in shallow or wet soils, they will grow the better for being on a permanent mound. Plant a single plant in the centre of this mound, or, if you wish for a variegated pillar, plant two plants in the same hole, the one a pale colour or white, the other a dark variety: cover the surface with manure, and replenish this as soon as it is drawn in by the worms or washed in by the rains. Water with liquid manure in dry weather, and probably you will have shoots eight or ten feet in length. I scarcely know whether to recommend grafted roses on short stems for this purpose, or plants on their own roots; this will, in a great measure depend upon the soil, and perhaps, it will be as well to try both. Most roses acquire additional vigour, by being worked on the Dog Rose; but some of the robust varieties of this family grow with equal luxuriance when on their own roots; finally, for dry and sandy soils, I am inclined to recommend the latter.

THE AUTUMNAL ROSE GARDEN.

To Autumnal Roses we are much indebted for that prolonged season of interest which this "Queen of flowers," now gives. The roses of June, however splendid, soon fade; but some perpetual, or Noisette, or Bourbon-roses enrich our gardens with their perfume and gay colours, till the chills of approaching winter prevent the expansion of their flowers. Among the most fragrant of these autumnal beauties are

PERPETUAL ROSES.—This division has as much variety in its origin as in its appearance: it would, indeed, be a difficult task to trace the parentage of some of the justly esteemed varieties of this family. Our old red and white monthly roses have, no doubt, contributed their share of sweet assistance; for, in many of them, the powerful fragrance of the two very old damask-roses is apparent, and no perfume can be more pleasing.

In preference to giving a slight history of the family at the commencement, I shall, as I describe them, at the risk of being tedious, give the supposed origin of most of the varieties; premising, that all those termed true perpetuals have, generally, a terminal cluster of buds at the end of each shoot, whether produced in spring, summer, or autumn.

Antinous is a new rose, evidently between the French Rose and Crimson Perpetual, equalling that fine rose in form and fragrance, and surpassing it in beauty of colouring: but it partakes rather more than it ought to do of the French Rose, as it is not a true Perpetual. However, as it often puts forth its fine crimson purple flowers in September, it will be much esteemed, as we have hitherto been accustomed to roses of more sober hues in that pleasant month. Billiard, so named from a French rose amateur, is a pretty bright rose, very fragrant and double, and a True Perpetual. Belle Italienne approaches very near to the Crimson Perpetual, except that its flowers are larger, and not quite so double: this is also a True Perpetual. Bernard, or Pompon Perpetual, is a most beautiful new rose, with rather small flowers; but these are very double, and finely shaped, of a delicate carmine colour: this is a True Perpetual, and a most desirable rose.

The Crimson Perpetual, Rose du Roi, or Lee's Crimson Perpetual, deserves a few extra words of comment. This fine rose was raised from seed, in 1812, in the gardens of the palace of Saint Cloud, then under the direction of Le Comte d'Elieuv, and named by him Rose du Roi; owing, I suppose, to Louis the Eighteenth soon after being restored, and presenting an opportunity for the Comte to show his loyalty: it is not recorded that he changed its name during the hundred days, to Rose de l'Empereur. It is asserted, that it was raised from the Rosa Portlandica, a semi-double bright-

coloured rose, much like the rose known in this country as the Scarlet Four Seasons, or Rosa Pæstana; which Eustace tells us, in his Classical Tour, grows among the ruins of Pæstum, enlivening them with its brilliant autumnal flowers. This is treated as a traveller's tale by one or two of our English botanists, and the Rosa Pæstana is said to have been originated from seed in England:—but was that seed from Italy?

Every gentleman's garden ought to have a large bed of Crimson Perpetual Roses, to furnish bouquets during August, September, and October; their fragrance is so delightful, their colour so rich, and their form so perfect.

Couronne de Beranger is a purplish rose, very double, and of good shape; a True Perpetual. Crispata, or the Curled Perpetual, is one of those whimsies of nature, more curious than pretty. Each leaf is curled, and forms a ring, giving an odd appearance to the plant. De Neuilly is a hybrid Bourbon of great excellence, having all the peculiar beauty of the Bourbon Roses, with the fragrance of the Damask Rose. It is a most abundant autumnal bloomer, and ought to be extensively cultivated. De Rennes is a True Perpetual, of a first rate excellence, with large and very double flowers. D  lice d'Hiver is a splendid rose, with large and finely-shaped flowers, of that vivid rose-colour so much admired; also a True Perpetual. D  sespoir des Amateurs, or Perpetuatissima, had its origin in Italy, from whence it was ushered into France, with its high-sounding names, equally ridiculous; for, in reality, the rose, though pretty, and fragrant, is much below many in this division. It is a hybrid of uncertain origin, and totally unlike any other rose in habit, which is dwarf, and rather delicate.

Ernestine Audio is a new and fine variety, with large and very double flowers, of a bright rose-colour. I have not yet been able to decide whether or not this is a True Perpetual.

Flon, Gloire des Perpetuelles, and La Mienne, are roses of the same race, or breed, and have the same leading features differing only, and that but little, in the size of their flowers. They are all True Perpetuals, and abundant bloomers, with a peculiar and pretty habit; for their foliage has a soft appearance; and, when the plants are covered with their brilliant red flowers, no Perpetual Roses are more beautiful. Perox is quite unique, and very magnificent, having larger flowers than any other in this division; but it is not a certain autumnal bloomer. The White Four Seasons has an attractive name, but it does not deserve it, as it has not the habit of the True Four Seasons Rose, producing constantly terminal flower-buds, but more like the Common White Damask, from which it is but little removed. The Grand Perpetual, or Fabert's, is a True Perpetual Rose of great excellence, requiring a rich soil and good culture to bloom in perfection. It has one great fault,—the flowers produced in July are so large that they almost invariably burst, but its autumnal flowers are so much more symmetrical. Grand et Belle, or Monstreuse, is a rose of immense size and beauty, and generally, a good and True Perpetual. Henriette Boulogne is a good rose, but rather an inconstant autumnal bloomer. This, with some others, the French distinguish as roses that “remontante rarement,” in contradistinction to the “True Perpetuals, which they say, “remontante franchement.” Jean Hachette is a most immense rose, and very double, but not a True Perpetual. Jenny Audio is a new and rare rose, not remarkable for any peculiar beauty, but fragrant, and a True Perpetual. Josephine Antoinette is now an old variety, but a True Perpetual of great excellence. Louis Philippe, being introduced before Antinous, has had a large share of admiration: its immense size, under proper cultivation, and its dark purple colour, make it even yet desirable; it is also a True Perpetual. Lodoiska and Madame Feburier are superb roses, and very large and double; but they are rather inconstant Perpetuals. Marie Denise is a fine robust variety: its flowers resemble those of Lodoiska, but more double, and the plant approaches nearer to a True Perpetual than that fine rose. Pompon Four Seasons is a very old rose, as its name may be found in many old catalogues; still it is rare, and quite a gem, as it blooms well in autumn, and forms a pretty little bush.

PART II.

LIST OF NEW AND RARE PLANTS,

*Noticed since our last.*1. CATTLEYA FERRINII. *Mr. Perrins Catleya.* [Bot. Reg. 2.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

This beautiful flowering species is a native of Brazil, and bloomed for the first time in this country, in the fine collection of R. Harrison, Esq., near Liverpool, and the species is named in compliment to Mr. Perrin, the intelligent and skilful gardener to that Gentleman. Each flower is about four inches across, the petals are of a beautiful rosy lilac colour. The labellum is of a very pale bluish purple, with white and yellow; a large portion of its end of a deep mulberry crimson.

2. CYNOCHE'S VENTRICOSUS. *Ventricose.* [Botanist.

ORCHIDACEÆ. GYNANDRIA MONOGYNIA.

Mr. Skinner discovered this interesting species in Guatamala, and sent it in 1822 to James Bateman, Esq., Kynpersley Hall. The genus is remarkable for the flowers having a striking resemblance to a swan when the flowers are held in a reverse direction to that in which they are produced. The flowers are produced on a raceme, each having five or six. Each flower is about five inches across, of a greenish yellow colour. *Cynoches*, from *Kuknos*, a swan; and *auchen*, a neck; in allusion to the graceful curve of the column of the flower, which resembles a swan's neck.

3. DRIMONIA BICOLOR. *Two coloured (leaves) Woodwort* (Bot. Reg. 4.

GESNERIACEÆ. DIDYNAMIA ANGIOSPERMIA.

The plant is a native of the West Indies, where, like the ivy in our own country, it runs up the trunks of trees, or spreads upon the ground. It requires to be grown in the hot house, and is admirably adapted for running up a pillar, or covering a wall in such a shady situation as other plants will scarcely grow in; it flourishes best when the wall is rather damp. The foliage is large, the upper side of a dark green, but at lower of a fine purple. The flowers are produced solitary, at the angles of the leaves. The flower has the form a *Gloxinia*, and about the size of *G. superba*, it is of a whitish yellow colour. The plant has bloomed in the collection of Mr. Knight, King's Road, Chelsea, and is sold at a low price. It is of very easy culture. *Drymonia*, from *drumonia*, woodland; referring to the situation it inhabits.

4 ECHINOCACTUS TUBIFLORUS. *Tube flower'd Spine-cactus* (Bot. Mag. 3627.

CACTEÆ, ICOSANDRIA MONOGYNIA.

Mr. F. Mackie of the Norwich Nursery, who purchased this species among others in Mr. Hitchins's fine collection. The stem is subglobose, much depressed, and deeply cut into eleven prominent angles, having bundles of about eight blackish spines, nearly three quarters of an inch long. The flower tube is six inches long, the petals spreading at its mouth five inches, and of a delicate white.

5 EPIDENDRUM PAPILLOSUM. *Warty fruited.* (Bot. Mag. 3631.

ORCHIDÆ, GYNANDRIA MONANDRIA.

Mr. Skinner discovered this interesting species, and introduced it to R. Bateman, Esq., in whose rich collection it has bloomed. The scape grows a foot long, and the flowers are produced on a terminal raceme, of from eight to ten upon each. The sepal is of a yellowish green, column the same colour but tipped with orange; lip, white with three rosy pink stripes. Each flower is near two inches across.

6. MAXILLARIA AUREO FULVA. *Golden brown.* (Bot. Mag. 3629

MAXILLARIA. ORCHIDÆ, GYNANDRIA MONANDRIA.

Sent to this country from Rio. The scape rises about two inches high bearing a raceme of several flowers, of a fine golden brown colour, the points of the petals being lightest. Each flower is rather more than an inch long.

7 MIMULUS ROSEO CARDINALIS. *Hodson's hybrid Mimulus.*

This fine variety was raised by Mr. Hodson, in the Botanic Garden, Bury St. Edmunds, and is intermediate between *M. cardinalis* and *M. roseus*. The habit of the plant is that of the former, but the flowers of the latter; they are however of a deeper rose colour, and twice size of the *M. roseus*. It is a very pretty variety, and well worth cultivating. *Mimulus* from mimo, a monkey; alluding to the seeds resembling the face of this animal.

8, RONDELETIA ODORATA. *Sweet scented.* (Botanist.

RUBIACEÆ. PENTANDRIA MONOGYNIA.

A native of Cuba, found near the town of Havannah, on bush covered rocks near the sea. The plant was sent in 1830 to Messrs. Loddiges. It has since bloomed in many hot house collections of plants. The present species is shrubby growing four or five feet high. The flowers are produced in a terminal panicle, each having from twelve to twenty blossoms, which are of a rosy red colour, having an orange coloured eye. Each blossom is near half an inch across. The plant is a profuse bloomer, and continues to bloom for several months. In its native situation, the flowers are fragrant, but in this country they emit but a slight odour. The plant is well worth a place in the hot house. *Rondeletia* in compliment to G. Rondelet a physician, and Author of Works on Fishes and Algæ.

9. STANHOPEA QUADRICORNIS. *Four horned.* (Bot. Reg. 5

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

S. Rucker, Esq. of Wandsworth, received this species from the Spanish Main. It is a very handsome flowering species, the flowers are much like those of *S. oculata*, but not near so much spotted. The plant has very much the appearance of *S. grandiflora*. The scape bears three or four flowers. Each blossom is about five inches across, sepals, yellow spotted with red. Labellum, at its base rosy crimson, then greenish white, terminating at the point with yellow. It is a fine flowering species well meriting a place in every collection.

10 TWEEDIA VERSICOLOR. *Changeable flowered.* (Bot. Mag. 3630.

ASCLEPIDACEÆ. PENTANDRIA DIGYNIA.

A very beautiful flowering Asclepiadaceous plant, which was discovered by Mr. Tweedie, and is most likely a native of Tucuma. It has bloomed in the Glasnevin Botanic Garden, Dublin. The plant is herbaceous, twining. The flowers are produced in long spikes, on numerous lateral peduncles,

each peduncle having an umbel of three or four flowers. Each blossom is about an inch across. When it first expands it is of a pale blue slightly tinged with green, then purplish, and when shrivelling, turns lilac. It is a very interesting species, highly deserving a place in every collection. Tweedia in compliment to Mr. James Tweedie, an intelligent and industrious collector of plants in Buenos Ayres, Tucuman, and Brazil, who has introduced into this country many highly interesting plants,

11. *ANÆCTOCHILUS SETACEUS*. *Fringed flowered*. [Bot. Reg. 1016.

ORCHIDACEÆ, GYNANDRIA, MONANDRIA

This newly introduced terrestrial orchideous plant, is a native of Ceylon, and Java too, from whence it was sent to the Duke of Northumberland at Sion Gardens, where it has recently bloomed. The plant has much the appearance of *Goodyera discolor*, excepting the leaves, which are streaked with golden veins, instead of white. The flower stems are similarly produced to those of *G. discolor*, but its blossoms are white and green with a small streak of rose on the labellum. *Anæctochilus*, from *anikros*, open, and *cheilos* a lip, alluding to the spreading open of the lip.

12. *CHRYSOCOMA SQUAMATA*. *Scaly stalked Goldylocks* [Bot. Mag. 3635

COMPOSITÆ. SYNGENESIA ÆQUALIS.

A pretty perennial fruticose plant, a native of Van Dieman's Land, and seeds of it were sent from thence by Ronald Gun, Esq. to the Glasgow Botanic Garden. The stem is much branched, and towards the base is of a red-brown colour, and are very downy. The flowers are produced at the ends of the branches, one upon each, of a pretty yellow colour. Each flower is about an inch across. It flourishes freely in the greenhouse, blooming most of the summer, and is of easy propagation by cuttings or slips. *Chrysocoma* from *chrusos*, gold; and *kome* hair, referring to the golden heads of the flowers.

13 *DODECATHEON INTEGRIFOLIUM*. *Entire leaved American Cowslip*. [Bot. Mag. 3622.

PRIMULACEÆ. PENTANDRIA MONOGYNIA.

This is a very distinct and handsome flowering species, which grows abundantly in the woody country of British North America. Mr. Drummond sent seeds of it to the Edinburgh, and Glasgow Botanic Gardens, where the plant has bloomed. The flower scape rises about nine inches high, and supports an umbel of ten or twelve drooping flowers, each blossom is near an inch long, of a rosy purple, with a yellow and white ring at the base. There are two other new species discovered one is *D. frigidum*, and the other not yet named. *Dodecatheon* so named in allusion to the number of blossoms, frequently twelve, which it bears in one head.

14 *JASMINIUM GLAUCUM*. *Prick-leaved Jasmine*. [Bot. Reg. 2013.

JASMINACEÆ. DIANDRIA MONOGYNIA.

A native of the Cape of Good Hope. It has been introduced into this Country some years, but it has not been merited as it deserves. The plant is of neat growth rising to the height of four or five feet, and from the flexibility of the branches, the plant is peculiarly adapted for training around a trellis of wire work, &c. It flowers very profusely, the blossoms are white, and very fragrant. Each blossom is about three quarters of an inch across. It is a hardy greenhouse plant flowering nearly all the spring and summer.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A LIST OF FLOWERING SHRUBS AND ORNAMENTAL TREES.—You would much oblige a Subscriber and Old Correspondent, by obtaining through the medium of your Work, the following information—a list of flowering shrubs and ornamental trees, best calculated “to face up” a shrubbery, with some idea of their price, where a good selection can be obtained, and particularizing such as thrive best on a chalky soil.

ON A LIST OF STOVE AND GREENHOUSE PLANTS, &c.—A subscriber wishes also that you would mention (when better things are not abundant) the names of a few stove and greenhouse plants, that, like the *Thunbergia*, do best in bog, (not peat) soil, and whether you have tried the experiment of mixing old tan with the mould given to the *Hoya carnosae*, and with what success. Perhaps, also, through the same medium you would inform him from whence that sharp white sand is procured, and at what price, in tolerable quantities, which is so necessary for the propagation of cuttings, &c.

It may be obtained at one penny per pound of most growers, or ironmongers. If a large quantity be desired it might be procured much cheaper from Dover or Brighton, and facilities for its cheap conveyance are afforded by water.—CONDUCTOR.

ON STOVE AQUATIC PLANTS—A subscriber would be obliged if some additional remarks (for the subject has been treated of before but not much at length) were given on the cultivation of, and soil for stove aquatics.

ON TULIPS.—A constant reader of the Cabinet wishes to ask some of the experienced Tulip fanciers, whether all the flowers broke from the same breeders take the same name with the first that was broken, or are they merely reckoned as different strains of the same flower. Is it the case that they are sometimes altogether different flowers. Having this season planted some celebrated named breeders, I am anxious to be informed as to this point, perhaps Mr. Groom would have the kindness to set me right in this respect, which would be esteemed a great favour by

Lincolnshire. Jan. 1828.

AN ENTHUSIASTIC TULIP GROWER.

REMARKS.

MEETINGS TO BE HELD IN FEBRUARY IN LONDON.—Botanical Society, held in Newman street, on Thursday, Feb. 1st.

Linnæan Society, held in Soho Square on Tuesday, Feb. 6th.

Horticultural Society, held at 21, Regent Street, ditto

Metropolitan Society of Florists and Amateurs ditto

Royal Society of Horticulture, held at the Egyptian Hall, Piccadilly, on Saturday, Feb. 10th

Medico-Botanical Society held at 32, Sackville Street, on Wednesday Feb. 14th.

Botanical Society held on Thursday, Feb. 15th.

Linnæan Society, held on Tuesday, Feb. 20th.

Horticultural Society ditto

Metropolitan Society ditto

Medico-Botanical Society, held on Wednesday, Feb. 28th.

NEW PLANTS.

Bignonia grandiflora. This very fine new species we saw at Mr. Lowe's of the Clapton Nursery. The leaves have a noble appearance, each being ten inches long, and proportionably broad. We could not ascertain anything respecting its blossoms, but if they correspond with the foliage, in such an increased proportion over any other species we have seen, it will be a plant of extraordinary beauty. Mr. Lowe has not got plants for sale.

Clematis azurea grandiflora. This is an improvement upon that truly beautiful species we noticed on a former occasion, and gave a figure of it in December 1836. This new kind Mr. Lowe does not yet offer for sale.

Campanula verbenæfolia. We noticed this new and beautiful species too, at the Clapton Nursery, and we understand it is a native of Japan. It produces its flowers in spikes, which are of a very handsome light blue colour. Mr. Lowe will have plants for sale next spring.

Aralia japonica. This is a singularly pretty plant, it bears a fine foliage which is very spiny on the upper surface, and produces a striking appearance.

Anigozanthus coccinea. This is new, and we were informed that it is very handsome, it is most probably a greenhouse plant, but we forgot to ask the question. Mr. Lowe will have plants for sale next season.

Deutzia corymbosa. Mr. Lowe has plenty of plants for sale of this new species, it had not yet bloomed at the Clapton Nursery, and we could not obtain any information respecting its flowers, but if the blossoms be as pretty as the *D. scabra*, being produced in corymbs, they will have a pretty appearance.

Clematis hederifolia. Mr. Lowe has got another addition to this justly admired genus, the foliage is singular when compared with the other kinds, we have seen. Of the flowers we could not obtain any information. This new species is not yet offered for sale.

Echium simplex. This very pretty species of Bugloss, Mr. Lowe possesses. The flowers are white and produced in spikes, having a neat appearance. It is a greenhouse species we understand.

Correa rufa. This is a new and fine greenhouse plant from Van Dieman's Land, being discovered on Mount Wellington. The flowers are said to be very handsome, viz. sulphur, orange, and green. It is a valuable acquisition for the greenhouse. Mr. Lowe will have plants for sale next season.

Clematis montana. Messrs. Rollinson of Tooting Nursery, possess this new species. It was sent into this country by Lady Amherst having been obtained from the Indian Himaylayan mountains. The flowers are white.

Gladiolus ramosus. Mr. Groom of Walworth, had fine plants in bloom of this splendid flowering species, which grow freely in the open border. The flowers are produced in large spikes, each blossom is three inches or more in length, of a fine rosy red colour, having a white stripe up each petal. It deserves a place in every flower garden.

Cytisus filipes. Mr. Lowe possesses this new species, it is a handsome greenhouse plant, producing numerous spikes of white flowers; when grown in contrast with the old yellow flowering species, it will produce a pretty effect.

Labelia corymbosa. Mr. Young of the Epsom Nursery, possesses plants of this new and interesting species, the flowers are white, having rose coloured spots interspersed, and being produced in corymbous heads, have a pretty effect.

Alstrameria acutifolia, and *A. hirtella*. We saw plants of these two fine species growing against a south aspected wall, in Mr. Young's, Epsom Nursery, which under his skilful management had, in one season we understood, reached the height of nine feet, having numerous branches, and bearing a vast profusion of flowers. The appearance was most beautiful, and the plan deserves a trial in every flower garden possessing the advantages.

Primula sinensis. Mr. Henderson of Pine Apple Nursery, has two varieties of Chinese Primrose with double blossoms, one has flowers of a cream colour, the other is of a pale rosy lilac colour; both kinds are very pretty.

Ipomea Nova spec. We have had plants of a new species in our possession for some time, but it has not bloomed with us yet. It was sent us as being a new species of *Rhodochiton*. We observed plants of the same with Mr. Lowe, and Mr. Young, but it had not bloomed with those gentlemen, the former informed us it had recently flowered at Lady Grenvilles, Dropmore, and on enquiry we find it turns out to be a fine species of *Ipomea*, having flowers of a fine rose colour, and growing and blooming freely in the open air during the summer. The plant will doubtless be very ornamental to train against a wall, trellis, or other support, as wire frame work, &c.

A LIST OF ANNUAL FLOWERS.

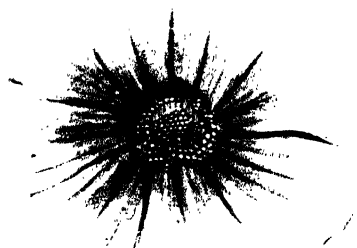
We have recently endeavoured to obtain information from the various nurserymen and seedsmen, respecting the kinds of annuals which they now offer for sale, and we have arranged them under three divisions, viz. hardy halfhardy, and tender. We hope the lists will be useful to our readers, affording facilities in making a selection for any desirable period of the blooming, colour of flowers, height of the plant, &c.

HARDY.

- Bladder Kemia, 2 ft. yellow brown, June to September
 Blue Bottle, *Cyanus*, mixed, one foot and a half, divers, June to Sept.
 Candytuft, three-fourths of a foot, crimson, June to August
 Normandy, one foot, deep purple, June to August
 purple, one foot, purple, June to August
 purple tree, one foot, purple, ditto
 sweet scented, one foot, white, ditto
 Carthamus, Dyers' 3 ft. orange red, June to July
 Catchfly, Lobel's mixed, one foot, red and white June to August
 painted 2 ft. red ditto
 many-flowered, one foot, red ditto
 three-nerved, one foot, red ditto
 small red, one foot, red, ditto
 Chrysanthemum, quilled, 3 ft. yellow, July to September
 white 3 ft, white ditto
 tricolor one foot, various ditto
 new golden, one foot, yellow ditto
 Clary purple-topped, a foot and a half purple, June and July
 red topped, a foot and a half, red June to September
 Clintonia pulchella, half a foot, blue and yellow
 Convolvulus minor, three colours, June to September
 two-coloured various ditto
 Sicilian, blue, ditto
 Flos Adonis, one foot, scarlet, July and August
 Hawkweed, red, one foot, June to August
 white variety, one foot, ditto
 yellow, one foot ditto
 silvery, one foot, white, ditto
 Larkspur, fine dwarf, one foot, divers colours, July and August.
 double dwarf blue, one foot, ditto



Linum catharticum



Linum tenuifolium



Verbena officinalis

Larkspur double dwarf rose, one foot	ditto
double dwarf slate, one foot	ditto
double dwarf white, one foot	ditto
double dwarf unique, 1ft. various colours	ditto
fine double tall mixed a foot and a half, divers colours	ditto
fine double blue, foot and a half	ditto
fine double rose, a foot and a half	ditto
fine double white, a foot and a half	ditto
fine double slate, a foot and a half	ditto
Larkspur, branching, mixed, a foot and a half divers colours	ditto
fine double rose, a foot and a half	ditto
Lavatera white, 3ft, July to September	
red, 3ft.	ditto
Love lies bleeding, 3ft.	ditto
buff or white, 3ft.	ditto
Lupines, large blue, 3ft.	ditto
Dutch blue, 3ft.	ditto
large rose, 3ft.	ditto
small blue, 2ft.	ditto
straw-coloured, 2ft.	ditto
white, 1ft.	ditto
yellow, 2ft.	ditto
Mallow, China, one foot, red and white, July and August	
Marigold, Cape, one foot, white and purple, June and August	
hybrid, large Cape, one foot, white	ditto
new double, 2ft. orange red	ditto
new scented, one foot, yellow, June to September	

(To be continued)

REFERENCE TO THE EMBELLISHMENTS. *

Arrana Verbena, Earl of Arran's Verbena. Mr. Tweedie sent seeds of this very fine species from Buenos Ayres to the Edinburgh and Dublin Botanic Gardens. The plant has bloomed at the latter place, from whence we received our drawing. It is said to be more shrubby than the lovely *V. Tweediana*, and when grown in contrast with the other species, will have a pretty effect. It has been named in compliment to the Earl of Arran.

Cosmos tenuifolius, slender leaved. This pretty flowering annual is a native of Mexico, blooming profusely when raised from seed in autumn and kept through the winter, which it can easily be done, either in a cool frame or greenhouse. It requires to be kept rather dry, the foliage being so fine is liable to damp off, and kill the plant. We have seen it do well when grown in good sized pots and kept as an ornament to the greenhouse during summer, and when good strong plants are turned out of pots early in May into the open border, such bloom well through the season. It forms a pretty contrast with *Calliopsis tinctoria*, &c. it being of a similar habit, and grows from two to two and half feet high.

Lisianthus Russellianus, Duke of Bedford's Lisianthus. Gentianese Pentandria Monogynia. A drawing of this very fine annual was sent us from Glasgow, the plant had recently bloomed in the greenhouse at the Botanic garden at that place, and from the representation given of it, it is one of the finest plants that have been lately introduced into this country. The blossoms are produced in terminal panicles, and being both large and numerous have a fine effect. It is a native of the Texas, from whence seeds were sent by the late Mr. Drummond. It is very probable that like other plants sent from the same country, that if seed be sown in autumn, and the plants be kept through the winter, then turned out into the open border in spring, that they would flourish abundantly through the summer. Or if sown early in spring and planted out in May, they might do well in the open border. The known liberality of the proprietors of the Glasgow Botanic Garden, will doubtless soon cause the plant to be offered to the public.

FLORICULTURAL CALENDAR FOR FEBRUARY.

GREENHOUSE.—This department should have good attendance during this month, similar in its operations to those directed in January, which see.—Oranges, Lemons, and Myrtles, &c. will require water frequently, they usually absorb much. The herbaceous kind of plants will require occasional waterings, but less frequent and in less quantities than the woody kinds. Succulents, as Aloes, Sedums, &c., should be watered very sparingly, and only when the soil is very dry. Air should be admitted at all times when the weather is favorable, or the plants cannot be kept in a healthy state. If any of the Orange, Lemon, or Myrtle trees, &c. have naked or irregular heads, towards the end of the month, if fine mild weather occur, begin to reclaim them to some uniformity, by shortening the branches and head shoots, by this attention they will break out new shoots upon the old wood and form a regular head; be repotted in rich compost in April, reducing the old ball of earth carefully, and replacing with new soil. After shifting it would be of great use to the plants, if the convenience of a glass case could be had, in which to make a dung bed, that the pots might be plunged in this would cause the plants to shoot vigorously, both at the roots and tops. Repot Amaryllis, &c.

ANNUALS.—Towards the end of the month, sow most of the tender kinds which require the aid of a hot bed in raising.

ANONATHECA CRUENTA, the bulbs of should now be repotted into small pots, to prepare them for turning out into beds, so as to bloom early.

AURICULAS should now be top dressed, taking off old soil, an inch deep and re-placing it with new.

BULBS, as **HYACINTHS**, &c., grown in water glasses, require to be placed in an airy and light situation. The water will require to be changed every three or four days. The flower stem may be supported by splitting a stick at the bottom into four portions, so as it will fit tight round the edge of the glass at the top.

CALCEOLARIAS, seeds of, should be sown during the month, and be placed in a hot bed frame.

CARNATIONS, layers should be transplanted into large pots towards the end of the month, or planted in the open border.

CUTTINGS OF SALVIAS, FUCHSIAS, HELIOTROPES, &c., desired for planting out in borders or beds during spring or summer, should now be struck in moist heat, in order to get the plants tolerably strong by May, the season of planting out.

DAHLIAS.—Seed should be sown either in pots or upon a hot bed. Pots or boxes with seed placed in a warm room, near light, and admitting plenty of air to the plants when up, will succeed well. Dahlia roots should now be potted or be partly plunged into a little old tan in the stove, or a frame to forward them for planting out in May. As shoots push, take them off when four or five inches long, and strike them in moist heat.

HERBACEOUS PERENNIALS, BIENNIALS, &c.—May be divided about the end of the month, and planted out where required.

HYDRANGEAS.—Cuttings of the end of the last years wood, that possess plump buds at their ends, should now be struck in moist heat; plant one cutting in a small pot (60's). When struck root, and the pot is full of roots, repot them into larger; such plants make singularly fine objects during summer.

MIGNIONETTE, to bloom early in boxes, or pots, or to turn out in the open borders, should now be sown.

RANUNCULUSES should be planted by the end of the month.

ROSE TREES, LILACS, PINKS, HYACINTHS, POLYANTHUSES, NARCISSUS, &c. should regularly be brought in for forcing.

TENDER ANNUALS.—Some of the kinds, as Cockscombs, Amaranthuses, &c. for adorning the greenhouse in summer, should be sown by the end of the month; also any tender Annuals, desired to bloom early in the open border.

TEN WEEK STOCKS, RUSSIAN AND PRUSSIAN STOCKS, &c., to bloom early, should now be sown in pots, placed in a hot bed frame, or be sown upon a slight hot bed.

THE
FLORICULTURAL CABINET,

MARCH 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE RELATIVE MERITS OF IRON AND WOOD ROOFS FOR
STOVES, GREENHOUSES. &c,

BY J. THOMSON NURSERYMAN AND LANDSCAPE GARDENER, AND HOT HOUSE
DESIGNER, BEULAH SPA, CROYDON, SURREY.

With practical observations and calculations on the consumption of Fuel, breakage of Glass, &c. under both kinds of roofs made during fifteen years practice as gardener to the Duke of Northumberland at Sion House, at Kew, and elsewhere; with an account of several years observations made on heating and forcing, houses with common Flues, Steam Boilers, and with six of the most approved systems of heating by hot water: also a description of his Economic wrought iron Egg-shaped BOILER, the invention of the Writer, which has given general satisfaction for the efficacy and simplicity of its construction, and its economy of fuel and labour.

KNOWING that a great diversity of opinion exists as to what description of materials are of most avail in the construction of roofs, for stoves, greenhouses, and other buildings intended for the culture of fruit, and of tropical and other exotic plants; and having had for years the management of extensive ranges of glass at Sion House and other places where the lights and rafters were constructed both of cast iron and wood, I am induced to

submit to your consideration the result of my practical observations relative to the two description of houses under consideration as a guide to persons who may be inclined to raise such erections, but are unacquainted with the injurious consequences of ill-constructed hothouses for horticultural purposes. Having had fifteen years practical experience with, and the management during that long period of about three thousand running feet of glass, designed for the culture of fruits and plants, enable me to speak with some decision on the subject; and there are, I doubt not, hundreds of practical gardeners, who will confirm the truth of the following observations, and agree with me in the decided conviction I entertain of the superiority of wood over iron. I feel fully justified indeed in saying that when the merits of wood, and the demerits of iron are fully ascertained, the erroneous prejudice in favour of the latter, will cease to exist in the minds of all candid men who are practically acquainted with the properties of the two materials. Every person possessing even a very small portion of knowledge of the expansion and contraction of all metallic substances, may form some idea of the inevitable expansion of a large iron roofed house in a hot summer's day, and of its unquestionable contraction during a night of severe frost, so powerful have I known the action of the sun's rays to prove in expanding the iron rafters and lights of a large roof on a hot day, that I have found the strength of too and sometimes three men required to force down the sliding lights for the admission of air.

In fully equal proportion I have witnessed the contraction of the metal during the intensity of the winter, when so large have been the apertures between the rafters and the lights as to admit the external air, in a degree sufficient to counteract entirely the power of two strong fires when the flues have been heated to the greatest excess before the temperature of the house could be raised to three degrees of Fahrenheit, the thermometer standing at 18 degrees of frost, (out of doors) this was in February 1830. Now this took place in a house of no very great dimensions compared with the wood-roofed vinery I am about to describe. The dimensions of this building were forty feet long by sixteen wide, and nine high, with a pit in the middle for the culture of pines, &c. which very much reduced the cubical number of feet of air to be rarified as compared with the wood roofed house

which was fifty feet long, fourteen wide, and fourteen high, without any pit in the middle.

Having thus stated the dimensions of the houses, I shall now give the result of the investigation and calculations made relative to fuel, attention, &c. &c. the coals for both houses were measured before being placed for use, and after the consumption of the night's fuel, the result was as follows; the iron roof with 18 degrees of frost, required the consumption of nearly six bushels of coals, and unremitting attention during the night or until 3 o'clock in the morning, while the house with the wooden roof, consumed scarcely three bushels of fuel, in order to keep it at the same degree of temperature with its iron rival, and no attention was required after 10 or 11 o'clock at night, when the fires were made up and left. Moreover, being determined to investigate thoroughly the merits of the two materials, I caused a house constructed of wood, and also one of iron, precisely the same dimensions as regards superficial feet of glass, to be perfectly repaired in the autumn of 1832, and on having them examined and repaired in the following season, I found that in the cost of repairing the iron house was nearly double the sum required to repair the wood: I do not mean to say that double the number of squares were absolutely broken, but including the broken and cracked squares, there was more than double the number destroyed, and this is attributed to the expansion of the iron during summer, and its contraction in the winter.

From these calculations it is evident wood has the advantage over iron in four very essential points, viz. the saving of fuel, glass, and labour, and in the better growth of plants and fruits, as I have invariably found plants do not thrive so well nor look so healthy in an iron as in a wood roofed house. The non-conducting power of wood, and the electrical, nay, I may say, caloric sensibilities of iron, may be the cause of this difference. Iron is infinitely more liable than wood to the sudden and injurious extremes of temperature from heat to cold. I have always found during my practice, that no matter how the iron house is situated, unless there was a slight shading on the houses during the hot days in the summer months, the leaves of the pines and other plants become very brown and frequently scalded; but whenever these shadings are not used, I would strongly recommend that a large cistern or trough of water should be placed about the houses to make up for the continued evaporation for

the deficiency of the moisture exhaled by the powerful action of the sun.

Another important circumstance is worthy the gardener's attention, namely, that iron houses should be painted internally either annually or biennially at the furthest to prevent the drip from the corroded iron injuring the foliage of the plants, for I have always found this ochreous and metallic deposit injurious to the leaves.

Since these remarks were made, I have had subsequent proof of the correctness of my former comparisons having extended my observations still further in the year 1831, and these, as you will perceive, fully confirm the accuracy of my previous calculations by working two houses at the same temperature, 55 to 60 of Fahrenheit, the result was as follows, the wood roofed house consumed only a bushel and a half of coals every night, while the iron house burnt from two bushels and three quarters; to three bushels; this last experiment was two months later in the season than when my attention was made directed to the subject before, you will yet perceive they bear the same proportions, as to fuel, &c. as the former.

The dimensions of the houses were as follows, the wood roofed, fifty feet long, fifteen feet wide, and fourteen feet high; the iron roofed fifty feet long, thirteen feet wide, and twelve feet high; the latter was a vinery and had a pit in it for the culture of pines, which very much reduced the cubic feet of air to be heated, as compared with the wood roofed house for the culture of peaches which had no pit in the centre. Notwithstanding that, however, the whole of my observations and calculations are unfavourable to iron roofs, yet I am willing to admit that for lightness and neatness of appearance in the structure, iron has, and always will have the advantage, but still I am confident that if proper attention were paid to the construction of hothouses, and to materials used in the erections the appearance of a wood roofed house would not be altogether objectionable.

For assisting persons building houses for horticultural purposes, who may have had less practical experience than myself, I shall here give a brief description of such materials and mode of construction, which I think will combine the whole of the desired objects. The first thing to be attended to is to give the roof a proper pitch or inclination, so as effectually to carry off the water

and to prevent drip in the house, which is highly injurious to plants, particularly those grown in pots.

Secondly, to form the roof in the following manner, the rafters to be of wood varying according to the length of the rafter from six to eleven inches, the section of the rafter to be wedge-shaped from three to four inches wide on the upper side where the lights rest, and half an inch wide on the bottom or under the ends and sides of the lights to be made of wood, the top from five to six inches, the sides two and a half inches, and the bottom from six to seven inches wide, and the sash bars to prevent as much as possible the obstruction of the sun's rays, should be of copper, which will give the house a light and neat appearance, without subjecting the plants to the injurious extremes of temperature, heat and cold, as the small quantity of metal in the thin sash bars which need not be more than half an inch wide, and about the same in depth, will cause but very little variation in the temperature by radiation, and little from expansion and contraction, neither would it increase the expense of the light, but little more than if made of wood, For as copper of that dimension would not weigh more than 8 ounces to the running foot I should suppose it would be bought for about eightpence per pound, therefore the expence would be but trifling when compared with the advantage, indeed the extra expense would be gained in a few years by the saving of wood in repairing the glass, as glazier's cannot hack out old putty without destroying the sash bars, and this being very frequently repeated, as (is necessary when lights are kept constantly in use) very soon lessens the substance of the sash bars, I therefore recommend all persons when erecting forcing and other houses, to have them constructed of the above materials, particularly if they are desirous of excelling in the culture of fruits and plants, as by the use of copper sash bars, they obtain all the desired objects, viz. lightness of appearance, economy of fuel, glass and labour. Moreover, any Gentleman before erecting or deciding on any particular plan or dimensions of houses for horticultural purposes, should consult his own gardener or some other practical man, acquainted with the subject, as it is impossible for any architect or surveyor to know the proper dimensions and elevations of hothouses, greenhouses, or other erections, to ensure all the intended purposes, to which they are appropriated so well as the gardener. It is true that an architect may make a very interesting external drawing which

to the eye appears perfection, without its even answering any of the desired ends, convenience of paths or walks, bark or tan beds, stages, flues, cisterns for water, ventilation and innumerable other little requisites and necessities for a stove, greenhouse, or conservatory may be overlooked, and as every gentlemen who goes to the expence of erections of this description, expect in due time to have the benefit of his outlay in fruits, or the satisfaction of an extraordinary fine specimen, or general display of flowers, should he eventually be disappointed in not enjoying those anticipated gratifications through the bad construction of his house or houses. I regret to say it frequently occurs that the industrious, persevering, able, and anxious gardener is blamed for neglect of duty, or want of skill, not only by his employer, but by others equally unacquainted with the cause. But upon examination of the house by a competent and practical man, it turns out that the blame and ill success are attributable to the formation and aspect of the house, that various genera and species of plants requiring peculiar situations, had the gardener been consulted as to the height of the stages, depth and width of tan beds, and proper situation of the flues, or other modes of heating; all this disappointment to the employer and employed through not consulting a practical person would have been prevented. Moreover, it too frequently happens with these "*pretty*" plans prepared by non practical men, that there is an insufficiency of means provided for the proper ventilation of houses, and want of ventilation in iron curvilinear roofs, is frequently attended with the most disastrous consequences, and as a confirmation of the correctness of my observations, and of the importance of proper ventilation, plants are always liable to be scorched under an iron-roofed house.

I remember witnessing this last summer the destruction of the whole of a fine crop of grapes as well as the foliage, when early full swelled, in a Gentleman's hothouse in Kent, which was erected of cast iron about six years ago, the destruction occurred through the architect failing to allow proper ventilation, and to prevent the second house of grapes which had then suffered severely from sharing the same melancholy fate, the gardener who is admitted to be as good a practical man as any in the kingdom, caused some holes to be made in the back wall of the house, about one foot wide, and three long. where he introduced shutters hung on hinges, by which means he fortunately

succeeded in saving the second house of fruit, but not without great injury to the foliage; this misfortune and unavoidable circumstance was generally known in the neighbourhood of Seven-oaks, and observed by many practical gardeners, who can vouch for the accuracy of this statement.



Agreeable to your request I have forwarded the description of the boilers, which I trust you will receive safe. Figures 1, 2, 3, and 4, is intended for houses of small dimensions, and the large one, figure 5 for extensive houses: this, as well as the other boiler is oval-shaped, and would be sufficient to heat seven or 800 feet of four-inch pipe at a trifling expense, for during the severest part of last winter, all the houses I have heated with this plan of boiler, were kept up to their respective temperatures, without burning a bushel of coals, the only fuel used was small coke, and during the intense frost of Friday night Jan. 19th last, when the thermometer stood at a quarter past 6 o'clock in the morning, at 12 degrees below Zero, we had not the least difficulty with keeping every house, both stoves and greenhouses at their respective temperatures. I have devoted much time and attention to heating houses with hot water for several years, but more particularly last season, and this winter up to the present time, and from accurate calculations made of the number of feet of surface of glass exposed to the action of the weather, I am enabled from watching the thermometer, both out of doors and in the houses, with all extremes of weather, to calculate most correctly the number of feet of surface of pipe required to command (even with 42 degrees of frost) any given degree of heat required for stoves, greenhouses, and other buildings, and the want of this practical knowledge, and attention to this highly important part, (the radiating surface) has been the cause of so many complaints against the system of heating by the circulation of hot water, all of which would have been prevented had the hot water fixer devoted a few nights during the severe frosty weather to this indispensably necessary calculations, but then his remarks should not have rested on the observations made during a calm night of severe frost. I have found by sitting up to watch the thermometer for whole nights together, that a 16 degrees of frost, with a strong wind, is more trying to a house

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than the severe frost on last Friday, Jan, 19th, when the thermometer fell to 10 degrees below Zero, or 42 degrees of frost.

I am induced to send you this account of the degrees of frost at Norwood, (which may be relied on), as I sat up the whole of the night to make my observations and calculations, thinking it might be interesting to some of your numerous readers

Figure 1, is the elevation of the front ; Figure 2, a transverse

Fig. 1.

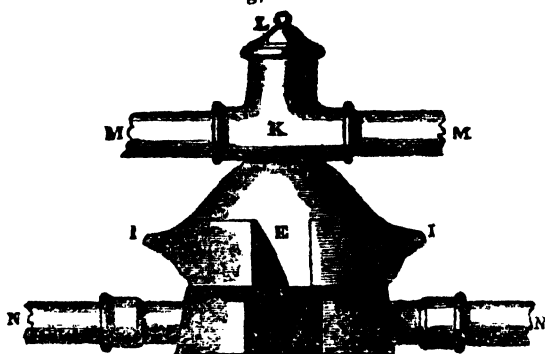
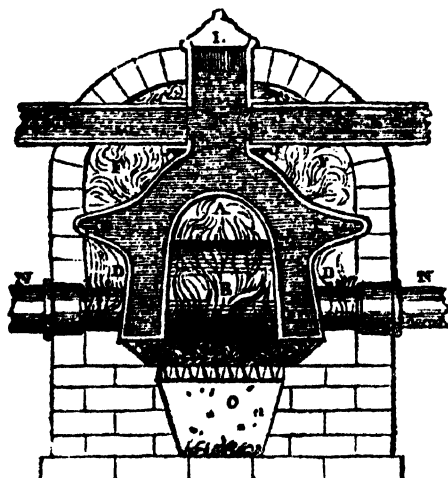


Fig. 2



section across the boiler and furnace ; Figure 3, a longitudinal section through the centre ; Figure 4, a plan of the furnace and lower part of the boiler, the same letters refer to similar parts

Fig. 3.

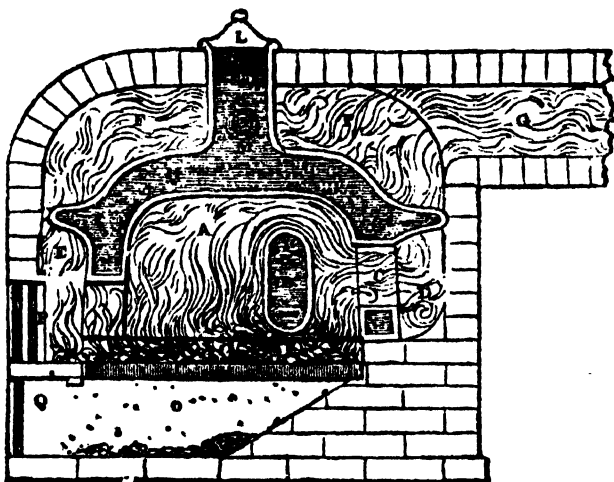
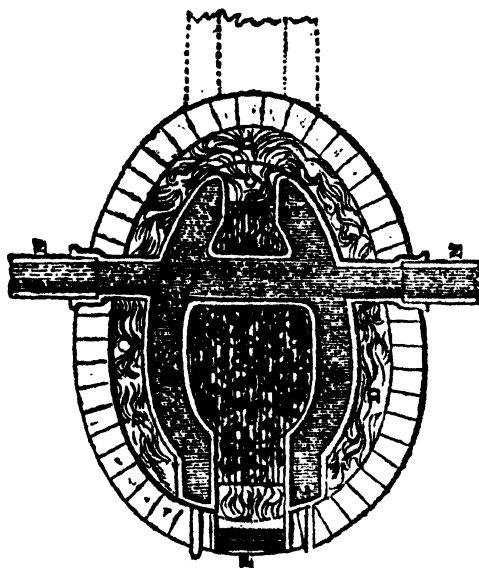


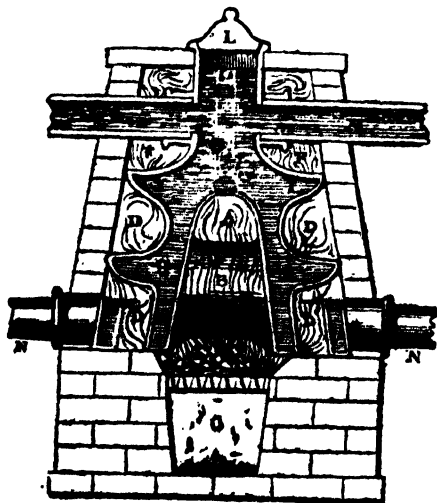
Fig 4.



in each figure : A is the furnace in which the fuel is placed, entirely surrounded (except the under side) with the boiler ; B is the check draft over which the heat, flame, and smoke passes to a small aperture C in the back of the boiler communicating with the flues D, surrounding the lower part which unite and pass through an opening E in the flange on each side of the furnace door to the flue F which surrounds the upper part, and terminates at the brick flue G, furnished with a damper to regulate the draft.

The boiler H is in the form of an egg, on the plan with a chamber all round connected with the check draft B and surrounded with the flange or cover to flue I, with an iron cap L either fixed or loose as may be required ; MM are two outlet pipes communicating with the upper part of the boiler, through which the hot water circulates. After passing to the outside of the brick work, the pipes are ramified into two or three branches, if it is required, for warming different houses or separate parts of the building ; NN are two return pipes, which enter the boiler ; O is an ash pit with a door Q to regulate the draft of the furnace as double doors ; P to exclude the external air. Figure 5 is a section of boiler, with an additional flue surrounding the lower part.

No 5.



I forgot to mention in my paper when describing the furnace door used to my apparatus, that between the door and the fire there is a piece of iron one foot three inches by one foot wide, which acts as a carbonizing plate, and when the fire begins to burn strong, so as to heat the iron hot, nearly the whole of the smoke is consumed. I will thank you to notice this omission and please let the whole of these observations and instructions as well as those sent before, appear in full if possible, as they are all very useful hints to gentlemen and gardeners.

W. THOMSON.

(To be continued,)

ARTICLE II.

CONVERSATION BETWEEN BLOOMWELL AND WOULDKNOW.

BY BIZARRE.

(Continued from Vol. V. page 270.)

WOULDKNOW. I think seed is sometimes very scarce.

BLOOMWELL. Some years are unfavorable to the sowing of seed, and I am afraid the present one will be among the number, the flowers being late in bloom. As soon as the petals wither, they should be carefully extracted, and most part of the calyx cut away, so that there may be no place to hold the wet, which soon spoils the seed. You should also be careful to protect the pods from earwigs, which are as destructive to the seed as they are to the flowers. A piece of wool wrapped round the stalk so as to prevent all communication with the pod, is the most effectual method of preventing their depredations, as they do not often get through the wool, their horns frequently getting entangled in it, they cannot proceed. When the seed is ripe, the pods should be dried, and then put into paper boxes till spring. Then shake the seeds out of the husks and sow it about the second week in April, in pots or boxes. When the plants are about an inch and a half or two inches high, transplant them into a bed of good light soil about six inches apart all ways; when planted closer they are often drawn up without layers, and so you have sometimes the mortification of losing a good seedling as soon as you have obtained it. The next summer when they begin to show bloom, pull up all single and worthless ones, to give more air and room to the others, giving all such as

have good properties another year's trial, as sometimes they will be much better the second year than they are the first.

WOULDKNOW. I had a handsome seedling picotee last year which I layered very carefully, but alas in the wet weather the worms broke off and destroyed every sprig, so that I entirely lost it.

BLOOMWELL. I do not wonder at it, I have been served so myself, but lately I have taken care to prevent the mischief.

WOULDKNOW. Pray, how may it be prevented?

BLOOMWELL. When you see a seedling worth keeping, make ready a pot of sufficient size, according to the growth of your plant, take it up with as much earth attached as you can place it in the pot, and fill it up with compost, water well, tie up the flower stems to a stick, and layer the shoots, keep it moderately moist, so that it does not flag, and in the course of a week it will be established.

I have shifted many seedlings in this manner when in bloom and never lost one. The layers take root quite as well as those that have been in pots all the season.

WOULDKNOW. When do you begin to layer your carnations, Mr. Bloomwell?

BLOOMWELL. Any time when they are fit to layer, I have layered them at all times, I believe, between Mayday and Martinmas, and have had rooted plants from it, but I by no means recommend late layering, except when you cannot get them ready to lay in the early part of the season: some will say that early layers are apt to spindle, but I do not think that their early layering is the cause of it, they would have spindled just the same if they had not been layered; the earliest layers get the best roots, and are most likely to stand the winter, therefore I always begin to lay as soon as the grass is ready, and continue as long as I have any to layer.

WOULDKNOW. What do you consider the best method of layering?

BLOOMWELL. Begin your incision about a quarter of an inch below the second joint, and continue it close up to, but not into the joint, but of the lip close to the joint from the outer ring of which the roots will protrude, when you separate the layer from the mother plant, cut the other side close to the joint also, and the young plant will be as sound as a piping when the joint is cut through in the usual way, the pith often gets damaged, and

causes the plant to perish. I know some florists make a rule of leaving a piece of stalk to the layer, thereby (as they say) to increase their chance of more roots, but in my opinion they only increase the chances of decay. I received some layers last season from a florist in Lancashire, which were cut through the joint and half way to the next, the result was, several of them perished before blooming; perhaps some people may think it their interest that the plants they sell, should not live; but for my part I am determined not to buy twice of any person who layers in that manner. When the layers are cut in the manner I have described, close to the joint, there is not half the risk of the wet destroying them as it frequently does; those layered in the common way by lodging in the pith, which soon rots and contaminates the whole plant.

WOULDKNOW. The shoots sometimes grow so high up the stalk that they cannot be got down to the surface of the pot, how do you contrive to manage them?

BLOOMWELL. The simplest way is to place another pot filled with soil at a proper distance, and gently bend down the stalk to it, securing it with a strong hook, and then lay your shoots. Another method said to be practised in France, is to take a small piece of lead paper, such as tea is commonly wrapped in, and after you have cut your shoot in the proper manner, wrap the paper close round the stalk at the bottom, letting the top remain wide open, in the form of an inverted cone, the joint being about the middle of the paper, fill it with fine compost, and water it to make it settle round the joint, it must also be watered occasionally till struck, make the paper fast to the stick which supports your plant.

WOULDKNOW. Which is the best time to take off the layers?

BLOOMWELL. The general part of them should be potted off the beginning of October, such as are slow or late strikers, may be perhaps as well left on till spring. When well rooted however, they may be taken off at any time during winter, provided it be open weather, placing the plants thus removed under a frame or hand-glass, or what is better, in a carnation house till spring. In planting out your layers in the spring, do not be too much in a hurry with them, but wait till the weather appears settled.

WOULDKNOW, I am extremely obliged to you for your information, and hope to visit you again.

BLOOMWELL. I shall be happy to see you or any other florist

at any time for the company of florists always delights me ; you know the old adage,

Birds of a feather,
Will flock together !

Having brought this conversation to an end, I return my best thanks to the Conductor for his readiness to insert it, and should you or your readers approve, perhaps I may give you, at no distant period, another conversation on Floral Affairs.

BIZARRE.

(We shall be much obliged if our respected correspondent will favour us with the article referred to.—CONDUCTOR.)

ARTICLE. III.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

(Continued from page 56.)

THIS edifice was constructed by immense stone beams laid on pillars of stone, the first flat being a square of about four hundred feet each way; these flats or stories lessening in surface as they increased in height. The stones were first covered with reeds, cemented together with bitumen. On this covering was laid a double row of bricks united by cement, which were then also covered by sheets of lead, in order to prevent the moisture from penetrating downwards; and these sheets lastly sustained a depth of earth sufficient for the plantation of trees and shrubs. We are told that this elevated shrubbery was watered by fountains, the water of which we presume to have been conveyed into it by manual labour, as skill in hydraulics appears to be an acquirement of later times; and perhaps the ancient Egyptians from their peculiar situation and circumstances, were the only people who attended at that period to this science.

We have noticed these gardens of Babylon, to show that pleasure grounds have existed from the earliest ages in civilized countries. As the arts have flourished or been neglected so have gardens flourished or decayed.

The Romans would naturally attach to their villas in this country a similar style of garden to that which they had in Italy. But this would be lost in baronial times, when nothing was secure outside the castle walls. However, Gardens of considerable ex-

tent were joined to the convents and monasteries of England, and we find that the cultivation of flowers and shrubs was attended to by most of the religious recluses of those establishments, as well as that of fruits, pot herbs, and medicinal plants.

The citizens of London had gardens to their villas as early as the time of Henry II., which Fitz-Stephen tells us were, "large, beautiful, and planted with trees." In Cerceau's *Architecture*, which appeared in the reign of Henry III. every ground-plot was laid out with plans of labyrinths darterres.

The royal gardens of Nonsuch in Surrey were formed in the time of Henry VIII. The privy gardens of that palace were planted with flowering shrubs and fruit trees, and ornamented with basins of marble fountains, and pyramids. The gardens of Hampton court were also planted about the same period, by Cardinal Wolsey; and from that time to the present. the taste for ornamental trees and shrubs have continued to increase.

Charles II. returned from the continent with a taste completely French; Evelyn also, from his travels through France and Italy, during the commonwealth, imbibed similar ideas. Thus our plantations at that time consisted entirely of long, dull avenues, and our pleasure gardens of clipped hedges, walks laid out upon geometrical principles, and evergreen trees shorn into fanciful and ridiculous figures. Le Notre who planned the celebrated gardens of Versailles, came over at this time to England, by desire of Charles, to plant the parks of Greenwich and St. James's.

Early in the eighteenth century, the formal and heavy style of gardening which had for some time prevailed, was changed by the united efforts of the English poets and painters of the day. By their pure taste and united efforts, they give birth to that classical style of planting which has since been so much admired and imitated throughout the most refined parts of Europe.

Whilst Addison was forming a rural garden at his retirement at Bilton, near Rugby, Pope was employed in laying out a picturesque plantation at Twickenham. At the same time, with their pens they engaged in open war against the right angles and disfiguring shears of the gardeners of their day, against whom they levelled some of the keenest shafts of their ridicule. These geniuses were seconded by Kent, who as a painter and architect, was adapted to embody their imaginations. In his capacity of landscape planter, he laid out the grounds of Claremont and Esher, about the year 1730; and as he painted the hall at Stowe,

it is probable that he assisted Lord Cobham in the grouping of his plantations also, which had been commenced on the modern land about the time Pope was forming the gardens at Twickenham.

We are informed by ancient historians that the Persians of old had parks, which contained animals of the chase; and the Romans had similar enclosures for the same purpose. It is generally supposed, that the park at Blenheim is the site of grounds that were once used by that people for hunting. It is also conjectured to be the same spot which formed the park of Henry I. who we are told had a park at Woodstock.

The word "park" is originally Celtic, and like the French word *parc*, signifies an enclosed spot for the confinement of animals. "No man can now," says Wood, "erect a park without a licence under the broad seal; for the common law does not encourage matters of pleasure, which bring no profit to the Commonwealth. But there may be a park in reputation, erected without lawful warrant: and the owner of such park may bring his action against persons killing his deer." It is considered in law to be no longer a park when all the deer are destroyed, for a park must consist of vert, venison, and enclosure; and to pull down park walls or pales, subjects the offender to the same punishment as killing deer.

It will be necessary now to make some observations on the formation and planting of shrubberies, though under each article we shall state what trees assimilate best in neighbourhood. The style of this sort of garden must depend so much on the extent, situation, and character of the ground, that it would be absurd to offer more than general remarks.

The plantation should be carefully made to suite the building it is to surround. As the villa and ornamental cottage form the largest portion at present of edifices that claim a pleasure-garden, we shall confine our observations to the grounds attached to these dwellings. As such houses are generally built on situations too flat to admit of much variety, the first study should be to find how and where we can break the level by throwing up elevations, so as to answer the double purpose of obscuring private walks, and screening other parts from the wind.

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. CALESTEMON MICRIOSTACHYUM.
- Small spiked.*
- (Bot. Reg. 7.

MYRTACEÆ. ICOSANDRIA MONOGYNIA.

This very pretty flowering plant, is a native of New Holland, and has bloomed in the collection of William Harrison, Esq. Chesunt, Herts, for the first time in Europe. During the last year it was exhibited at one of the meeting of the London Horticultural Society, and a medal was awarded for its exhibition. The foliage of the plant bears a resemblance to the *Diosma uniflora*. The flowers are produced similar to the *Melaleucas*, having long stamens, and in neat spikes. They are of a very vivid crimson colour, and have a most brilliant appearance. The plant ought to be in every greenhouse and conservatory.

We understand that it is easily increased by cuttings. *Calistemon* from *Kalos*, beautiful; and *stemon*, stamen; referring to the brilliant colour of the stamens.

2. CARICA CITRIFORMIS.
- Small Citron fruited Papau.*

CARICEA, MONÆCIA DECANDRIA.

The plant is a native of Guiana, and it has fruited in the hot house collection of Charles Horsfall, Esqr. Liverpool. The flowers are small, of a yellowish white. The fruit is about two inches long, and an inch and a half across, of a very deep orange colour, which have a beautiful appearance, hanging so gracefully pendant on the branches. The plant grows very vigorously, so as to bear fruit the first season after the seed is sown. It grows to the height of five or six feet.

3. CHOROZEMA CORDATUM,
- Mr. Mangles's Chorozeema*
- , (Bot. Reg. 10.

PAPILIONACEÆ. DECANDRIA MONOGYNIA.

This very neat and handsome flowering species, is a native of the Swan river colony, and has been raised in the Garden of R. Mangles, Esqr. Sunning hill, Berkshire, where it has bloomed. The plant is a very distinct species, both in its foliage and flowers. A leaf is near two inches long, by one broad. The flowers are of a fine orange scarlet, the vexillum having a yellow base streaked with dark; the keel is of a crimson purple colour. The plant is a very free grower, Mr. Mangles's being at one year old near a yard high. It is a profuse bloomer, and ought to be in every collection of greenhouse and conservatory plants. From the well known liberality of the above gentlemen, cuttings will be extensively distributed, and as it propagates freely, plants will soon be in the Nursery collections. *Chorozeema* from *choros*, dance; and *zema*, drink.

4. CIRRHOPETALUM THOUARSII.
- Thouar's Cirrhopetalum.*
- (Bot. Reg. 11.

ORCHIDACEÆA, GYNANDRIA MONANDRIA.

Mr. Cuming sent this very interesting orchideous plant from Manilla, to Messrs. Lodiges's, where it bloomed last season. The plant produces nu-

merous flower stems, each rising to a foot high, and terminating in a dense spreading raceme of ten or a dozen flowers. The sepals are strap shaped, about an inch and a half long, of an orange and yellow colour. The petals are very small, pale yellow spotted with red, and the edges bordered with bristly pointed teeth, and the end terminating in an awl shaped point.

The plant merits a place in every collection of Stove Orchideæ. Cirrhopetalum, from kirrhos, tawny; and petalon, a petal; referring to the general colour of the flowers.

5. EPIDENDRUM FLORIBUNDUM. *Many flowered.* (Bot. Mag. 3637

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

A native of Mexico, from whence it was sent to Messrs. Lodiges, in whose collection it has bloomed. The flower stem rises about a foot high terminating in a panicle of numerous flowers, produced on several spreading branches. The flowers are about an inch across, both sepals and petals are very narrow. The petals are white, column green at the base, white above. Lip, white; with a carved line of red dots. The plant continues a long time in flower, and being produced numerous have a very interesting appearance, Epidendrum, from epi, upon; and dendron, a tree; referring to its native habitation.

6. EUPHORBIA VENETA. *Venetian Euphorbia,* (Bot. Reg. 6.

EUPHORBIACEÆ, MONÆCIA, MONANDRIA.

A native of the country around Venice, and has bloomed in the garden of the Hon. W. F. Strangeways, at Abbotsbury, Dorsetshire. It is a robust growing plant, what is usually denominated half shrubby. It is evergreen, and its trailing habit renders it suitable for a rock work, very well combining with sedums and similar plants. The flowers are of a yellowish green, produced numerous in a dense spike, and continue in bloom during a great part of summer. Euphorbia, so called after Euphorbus, Physician to Juba, King of Mauritania.

7. LOAZA LATERITA. *Red flowered.* (Bot. Mag. 3632

LOACEÆ, POLYADELPHIA POLYANDRIA.

Mr. Tweedie discovered this very interesting species in Tucuman, and seeds of it were sent to the Glasgow Botanic Garden; where it has bloomed both in the stove, and during summer against a good aspected wall, in the open air, in the latter situation it produced fruit also. It is a most beautiful annual plant, deserving a situation in every greenhouse, or other favourable situation.

The plant is a climber rough and stinging, the stems climb to the length of twenty feet or upwards, producing numerous flowers of a bright orange scarlet colour. Each blossom is near three inches across.

8. MAMILLARIA LEHMANNII. *Lehmans.* (Bot. Mag. 5634.

CACTEÆ, ICOSANDRIA MONOGYNIA.

This singular species has bloomed in the fine collection of Messrs. Mackie, Norwich; it is a native of Mexico. The flowers are of a pale straw colour, about two inches across.

9. PASSIFLORA TUCUMANENSIS. *Large stipulated passion flower.*

This species was also discovered by Mr. Tweedie, at St. Jago de Estero, and sent by him to the Glasgow Garden. Where in the stove, it bloomed in July 1837. The flowers are white, about two inches across. The plant grows very rapidly, and blooms most profusely.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON ROSE DU ROI, &c. I wrote to you some time since on destroying the wireworm, and from your so obligingly inserting the few observations, I made on the subject, I am induced to send you the following remarks, and shall feel obliged to any of your correspondents who will favor me with an answer to my question. Why have my standard rose trees (which bloomed luxuriantly last year), not put forth one blossom this autumn. They are of the 'Rose du Roi' species and very healthy: Should I have pinched off the buds in May and June? Perhaps some one who is in the habit of growing these kind of roses will favor me with an answer, likewise a description of the best soil for them and the Yellow Noisette.

ON A FUNGUS RISING AMONG TENDER ANNUALS, &c. I was very much troubled last season in raising my tender annuals, by a species fungus forcing itself up among the young seedlings in my hot bed. If some reader of the Cabinet will tell me how to guard against this evil another time. I shall be much obliged by an early answer.

• CALCEOLARIA.

REMARKS.

NEW PLANTS.---*Aconitum Chinense*. A very fine flowering species sent by Dr. Von Siebold from Japan, we saw it in bloom at Mr. Young's, Epsom Nursery. It is quite a hardy herbaceous perennial. The flower stems rise four feet high, each having numerous lateral spikes of fine blue flowers. Each flower is about two inches across.

Lilium lancifolium album. Mr. Young also possesses this new kind sent by Dr. V. Siebold from Japan. The flowers are white, very handsome. Also the two following kinds from the same source, viz.

Lilium roseum, and *L. punctatum*, both handsome flowering species. To persons partial to this beautiful tribe of plants, the above will be an interesting addition.

Scabiosa grandiflora, var. A new and very fine flowering variety is in the possession of Mr. Groom, Walworth, who will soon have plants for sale. It is a very fine ornament to the flower border.

Epimedium violaceum. Mr. Groom possesses this new, pretty and singular flowering species, it will require to be grown in the greenhouse, and will merit a place in every one.

Galphenia splendens. This very neat and pretty flowering species, we saw in bloom in the greenhouse at Mr. Groom's. The plant grows three feet high, or upwards, producing numerous lateral branches, which are adorned with pretty golden yellow flowers, each blossom about an inch across.

Daviesia verdata. Mr. Groom also possesses this new and fine species, meriting a place in every greenhouse. Its beautiful blossoms are strikingly handsome the most of the genus are remarkably neat and interesting. Mr. Groom will have a stock of this new species for sale in spring.

Euonymus japonica. A very strikingly pretty greenhouse plant, the plant grows to a very neat shrub, having fine foliage, the leaves are marked and freckled with white and gold and have a green neat edging. The plant gives a very neat relief in a collection of plants; Mr. Groom cultivates this new species.

Hepatica violacea. This new and very fine flowering species, is in the possession of Mr. Low, of Clapton Nursery, who will have plants for sale the coming season. We understood it would require to be grown in the greenhouse or cool frame during winter.

Campanula verbenasolia. We saw this new and pretty flowering species in bloom at Mr. Low's, its spikes of light blue flowers, making a beautiful shew. It is a native of Japan, and most likely will require to be grown in the greenhouse or pit frame. The plant merits a place in every collection; plants will be for sale in spring.

Echium simplex. This new and pretty species we saw at Mr. Low's, the flowers are white, produced in spikes, and have an interesting appearance; like the rest of the genus it is very showy. It deserves a place in every collection of greenhouse plants.

Phelconopsis amabile. This very singularly beautiful flowering orchideous plant, has bloomed in the fine collection of Messrs. Rollinsons, Tooting, who received it a few months back from Minalla. The flowers have the appearance of a large moth, they are beautifully streaked and veined, and are produced numerously. It is a very valuable addition to our Orchideous Epiphytes.

Stevia salicifolia. A very pretty new flowering species, which we saw at Mr. Low's; the flower spikes rise about a foot high, they are white. The plant requires to be kept in a frame during winter.

Correa speciosa grandiflora. This is a very fine flowering kind, much superior to the original handsome species; it deserves a place in every greenhouse or conservatory. Its fine scarlet green and yellow blossoms, hanging so gracefully in profusion, have a very ornamental appearance, and render it a very desirable plant; Messrs. Loddiges's, of Hackney Nursery, possess this fine variety,

OF GREENHOUSE AND HALF HARDY PLANTS WHICH WILL FLOURISH AND BLOOM FREELY DURING THE SUMMER MONTHS, IF PLANTED OUT IN THE OPEN BORDER.

Within a few years the brilliancy of modern ornamental gardening has been most surprisingly increased by the practice of planting out in the open borders many of the most splendid and free flowering greenhouse plants. By this means a very considerable number of show exotics are caused to blossom much more profusely than under any other mode of cultivation.

Some of the kinds of plants are much more suited for growing in masses. "as a bed of each," than others are; such we have marked with a star, and those which will thrive best in the air and smoke of towns, with two stars.

The kind of soil each particular plant will flourish and bloom the best in, is annexed to them. We have found, during twenty years practice in this department of Floriculture, that some plants when turned out of pots into the

open borders, even in common soil, have a tendency to produce a luxuriant foliage, and but very few blossoms; each luxuriance, however, is easily prevented, by using a mixture of sand or peat with common soil.

In the list of plants here given, we have only inserted such as keep in bloom for several successive months; there are many other beautiful plants, as *Gla-dioluses*, *Ixias*, *Watsonias*, and new *Azaleas*, *Rhododendrons*, &c., that will flourish and blossom equally well; but their blooming season being so short and at so early a season of the spring, as to be liable to injury, we have on that account omitted them. *Pelargoniums* are also omitted; the number of varieties, species, and colours being so extensive, we could not possibly particularize them within our limits. All the kinds, however, will flower freely in the open borders. Those of a luxuriant habit should be planted in sandy loam and peat, to prevent a mass of strong roots and foliage, and cause the production of flowering shoots; and others of a more delicate habit, should be grown in rich vegetable mould, from decayed leaves, &c. and peat soil.

The period for turning out plants into the open borders, varies with the situation of climate, season, &c.: but it is better to be a week too late than run the risk of early destruction. We purpose giving some directions before the Autumn, relative to the best means of keeping up a stock of plants for the open borders.

BLUE FLOWERS.

- Agathæa cœlestis*, 1ft. 6in., May, November, peat and loam.
Ditto linifolia, 2ft., April, October, do.
 ** *Anagallis Monelli*, 1ft., May, October, do.
 ** *Ditto Webbiana*, 1ft., do. do. do.
 ** *Ditto Phillipsii*, 2ft., do. do. do. ✓
 * *Cœlestina ageratoides*, 1ft., June, October, rich mould.
 * *Ditto cœrulea*, 1ft., June September, do.
Commelina cyanea, 1ft., July, September, do.
Heliophilla linearifolia, 1ft., June, September, sandy peat.
 ** *Heliotropium corymbosum*, 2ft., May, October, rich mould. ✓
 * *Hydrangea hortensis*, 1ft. to 2ft., June, October, peat and pure loam.
 * *Lobelia begoniæfolia*, 6in., June, September, do.
 ** *Ditto Erinus*, 6in. June, September, sandy peat.
 * *Ditto senecioides*, 1ft., July, September, rich mould.
Ditto cœrulea, 2ft., June, October, rich loam.
Ditto cœlestina, 2ft., do. do. do.
Salvia africanus, 2ft., May, September, rich mould.
 * *Ditto augustifolius*, 2ft., June, September, rich mould.
 * *Ditto chamædryoides*, 1ft. 6in., June, October, rich mould.
Sollya heterophilla, 1ft., July, October, do.
 * *Streptocarpus Rexii*, 6in., April, November. loam and peat.
Tweedia cœrulea, 2ft., July, September, rich mould.
 * *Witsenia corymbosum*, 1ft., May, October, sandy peat.

CRIMSON.

- Alstræmeria psittacina*, 4ft., August, October, loam and peat.
Azalea indica, var. *ignescens*, 2ft., May, September,
Amaryllis formosissima, 1ft., May, September, rich mould.
Ditto Forbesii, 1ft. 6in., July, September, do.
Ditto do. purpurea, 1ft. 6in., July September. do.
 ** *Calceolaria Wheelerii*, 1ft., May, October, peat and loam.
Cuphea Llavea, 1ft. 6in., June, August, do.
Dianthus aggregatus, 1ft., June, September, rich loam.
Phlox Drummondii, 2½ft., June, October, rich loam.

VERY DARK.

- ** *Calceolarias* numerous dark varieties, 2ft. May, October, rich mould.
Lobelia mucronata, 2ft. to 3ft., July, September, rich mould and peat.

- ** *Lotus Jacobæus*, 2ft., May, November, rich mould.
Senecio elegans, 1ft., July, November, do.

GOLDEN.

- Galaxia grandiflora*, 6in., May, September, sandy peat.
Hunnemania fumarisæfolia, 2ft. June, September, rich mould.
 * *Mesembryanthemum aureum*, 1ft., May, October, do. and lime rubbish.

ORANGE.

- ** *Anagallis grandiflora*, 2ft., June, October, rich mould.
 ** *Calceolaria Fothergilla*, 6in., May, October, rich mould and peat.
Homeria collina, 2ft., May, August, sandy peat.
 * *Lechenaultia formosa*, 1ft., June, September, peat and loam.
 * *Ditto oblata*, 1ft., June, September, do.
 ** *Lychnis grandiflora*, 1ft. 6in., June, October, rich mould.
 * *Mehernia pulchella*, 2ft., July September, loam and peat.
 * *Mesembryanthemum aurantiacum*, 1ft. 6in., June, September, rich loam and lime rubbish.
 * *Ditto bicolorum*, 1ft. 6in., May, September, rich loam and lime rubbish.
 ** *Mimulus glutinosus*, 2ft., May, October, rich mould.

PINK.

- Alstræmeria pallida*, 2ft., August, October, loam and peat.
Chironia linoidea, 2ft., June, September, sandy peat.
 * *Crocea saligna*, 2ft., June, October, sandy peat and loam.
 * *Erodium incarnatum*, 6in., May, August, rich mould.
 * *Linum suffruticosum*, 1ft., August, October, peat and loam.
 * *Mesembryanthemum floribunda*, 6in., May, October, sandy loam.
 * *Primula prænitens (sinensis)* 1ft., May, October, sandy loam.
Stevia lucida, 2ft., June, October, peat and loam.
Ditto salicifolia, 1ft. 6in., July, September, peat and loam.
 * *Tephrosia grandiflora*, 3ft., May, October, do.
Verbene Drummondii, 2ft., June, October, do.

PURPLE.

- ** *Calceolaria archnoidea*, 1ft., June, October, loam and peat.
 ** *Ditto purpurea*, do. do. do. do.
 * *Ditto insignis*, 1ft. 6in., do. do. sandy peat.
 * *Chironia frutescens*, 1ft. 6in., do. do. peat and loam.
 ** *Cineraria cruenta*, 2ft., May, July, do.
 * *Ditto lanata*, 2ft., May, September, do.
 ** *Lobelia speciosa*, 2ft., May, October, do.
 ** *Ditto unidentata*, 6in. May, October, do.
 Ditto strepurpurea, 2ft., do. do. do.
 * *Loddigesia oxaladifolia* 1ft., May, October, do.

(TO BE CONTINUED.)

FLORICULTURAL CALENDER FOR MARCH.

ANEMONIES—should now be planted, as early in the month as can be done.

AMARYLLIS'S—and other litiaceous bulbous plants which have been kept dormant, may now be repotted, and put into an increased temperature.

ANNUALS, HARDY,—if the soil be moderately dry, some of the most hardy kinds to bloom early in the summer, may be sown in warm parts of the

country, or situations well protected, early in the month, but in cold places not until the end of the month; for if the seeds of many sorts have begun to vegetate, and frost operate upon them, they are often destroyed. The best method of sowing the small seeds in patches is, to have a quantity of finely sifted soil; spread a portion where desired, after scattering the seeds, sprinkle a little more soil over them, and then press it closely upon the seeds, which will assist them in vegetating properly.

ANNUALS, TENDER—Such as have been sown and may be up, should have all possible air given to prevent their being drawn up weakly. In watering those in pots they must not be watered over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using water that is new milk warm. Those annuals sown in frames must be watered (when requisite) with a very fine syringe, or pan rose to sprinkle with; but the best plan is to take advantage of gentle rains. For any seeds yet requiring to be sown use fine soil pressed to the seeds, and when convenient, place the pots (if used) in moist heat till the plants are up.

AURICULAS.—Those requiring top dressing should be done immediately, by taking off about two inches deep of the top soil, and replace it with some very rich, more than one-half of it should be rotten cow dung two years old, and the rest loam and sand. Immediately after this dressing, let the soil be well settled by a free watering. By the end of the month the unexpanded blossoms will be nearly full grown; no water must be allowed to fall upon them, or the blossoms would be liable to suffer injury by it. All possible air may be admitted to the plants during the day, only screen from cutting frosty winds.

CARNATIONS. At the end of the month, the last year's layers kept in pots or beds during winter, should be planted off into large pots 12 inches wide at the top, 6 at the bottom, and 10 deep. In each pot three plants may be placed triangularly, not planting deeper than to fix them securely. The following compost is most suitable: Two barrows full of fresh yellow loam, three of well rotted horse dung, and half a barrow full of river sand, well mixed; plant in it without sifting, but breaking very well with the spade. place the plants in a sheltered situation out of doors.

CREEPERS.—and twining greenhouse or hardy plants, should be pruned and regulated before they begin to grow.

CALCEOLARIA SEED—should be sown early in the month, having the finest sifted soil for the surface.

CAMELLIAS.—Those kinds done blooming should be immediately potted, for if allowed to push the least before this is done, the operation frequently kills the tender shoots. In potting, &c. never cut the matted roots, but shake the soil off, and replace with what new soil may be required. If the balls are not matted with roots, just loosen the outer fibres with the hand, which will induce them sooner to push into the soil. A very free drainage is required, or the plants will never flourish. The following is a very good compost for growing them in:—One barrow full of rich loam, half a ditto of peat, half a ditto of very rotten dung, or rotten vegetable mould, and one third ditto of Calais, or other fine sand. Never use sifted soil, but well broken. As soon as the plants are potted, place them in a temperature of about 68 degrees of heat by day, and 60 by night. This will cause them to push more vigorously, and more certain to induce flower buds.

DARLINGS.—If not already put into excitement, should be done as early as possible. Seeds should also be sown, placing them in a hot-bed frame till up.

OSUNERIA, GLOXINIA, and TROPÆOLUM bulbs, that have been kept dry during winter, should now be potted, and be gently brought forward.

HYDRANGEAS. Cuttings may now be taken off, cutting off the tops of any shoots that have very plump leading buds, about one inch below the bud of each cutting. These inserted, each into a small pot, and placed in moist heat, will soon strike root, and will, with future proper treatment, bloomed one fine head each, most strikingly beautiful.

PELARGONIUMS. Cuttings now put in, struck in a hot-bed frame, and potted off as soon as they have taken root, will bloom during autumn.

POLYANTHUSES should now be top dressed, as directed for Auriculas, only the soil used need not be so rich. Seed may now be sown; the best method is to raise it in heat, harden gradually, and transplant when large enough.

RANUNCULUSES should now be planted, taking care no fresh applied dung is in the soil, nor should the ground to plant in be lightened up more than two inches deep. The soil of the bed should be half a yard deep at the least. The best roots for flowering are such as have the crowns high and firm, with regular placed claws.

ROSE TREE not yet pruned, if allowed to remain untouched till the new shoots of the present coming season be about an inch long, and be then shortened by cutting back all the old wood to below where the new shoots had pushed, the dormant buds will then be excited, and roses will be produced some weeks later than if pruned at a much earlier season. Plants in pots now put into heat, will come into bloom in May.

TUBEROSES should be planted, one root in a small pot, using very rich sandy soil: the pots should be placed in moist heat till the plants are up a few inches then they may be planted into larger pots, and taken into a stove, and finally into a greenhouse.

TULIPS.—At this season such as happened to be affected by canker will appear sickly, the roots should be examined, and the damaged part be cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid frosty air getting to the wound by exposure.

REFERENCE TO PLATE.

CLEMATIS FLORIDA; VAR SIEBALDII. This very handsome flowering variety was recently sent by Dr. Von Siebald from Japan. The plant grows very rapidly if planted in a warm situation, and flowers very abundantly. The petals, forming the dark centre, have a very pretty appearance in contrast with the greenish-white calyx sepals. If the plant be grown in the greenhouse it flourishes better, and produces a finer effect than in the open air. It flourishes best in peat and loam. We shall have plants to dispose of this month. *Clematis*, from *clema*, a vine, referring to its climbing habit.

SPARAXAS (Seedling) This very neat and pretty variety was raised by H. Dobree, Jun. Esq., Guernsey, along with a number of other very beautiful kinds. There the plants grow to the height of from two to three feet, producing spikes, with a profusion of blossoms. Their neatness, ease of culture, and beauty of the flowers, recommend them to all lovers of flowers.

CHORIZEMA OVATA. This most lovely species was discovered by Mr. Baxter, in New Holland, and is one of the neatest and handsomest greenhouse plants. It produces its blossoms in vast profusion. The plant grows about two feet high, having numerous lateral shoots, clothed with flowers. It merits a place in every greenhouse: its beauty and cheapness combine to recommend it. *Chorizema*, from *choras*, a dance, and *zema*, a drink. Labillardiere found this plant upon the west coast of New Holland, at the bottom of a mountain, near a place where after being tantalized with finding many salt springs. His party had just met with an ample supply of fresh water. This welcome refreshment seems to have suggested the name.

Chamaelirium luteum



THE FLORICULTURAL CABINET,

APRIL 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON RAISING TULIPS FROM SEED,

BY MR. JOHN SLATER, ALBION PLACE, LOWER BROUGHTON, NEAR MANCHESTER

THE raising of new varieties of Tulips has at length engaged the attention, of the amateur and Florist, and we are now on equal terms with the Dutch Florists. This change may be attributed to the care and attention bestowed upon the taking of seed. The great misfortune of our early raisers of Tulips from seed, was, that they took seed indiscriminately, and after sowing and waiting patiently for a number of years, they were much disappointed when they came into bloom, for there was scarcely one of medium quality. Had their judgment been properly directed, the English Florist would not have been so many years behind.

I would recommend the young Florist to seed only those which possess the best properties, and where one is deficient in some points and excel in others, to impregnate the one with the other. For instance, Charbonnier Noir or Polyphemus, possess every requisite but one, and that is the ground colour, which is a pale straw. To remedy this defect, I would impregnate them with San Joe, Captain White, or Old Dutch Catafalque, or some other sort which possesses a good bright yellow colour. If the colour of the Min d'or could be added to the black feathering of the Charbonnier, it would rank as first among Bizzares. Roi de Siam,

is generally too late for general exhibition, although it is a very fine variety. I would therefore impregnate it with Bienfait Incomparable, or La Mere Bruin Incomparable, in order to incorporate its good properties and also to endeavour to raise a sort equally as good, but rather earlier. The roses also are in general too high coloured, and here also he would endeavour to raise a variety possessing the beautiful colour of a Dolittle. Care must be taken, after impregnation, by either tying the bloom up with cotton, or placing it within a net bag, so that bees or flies may not injure your work. A careful attention to these hints would materially increase our number of good stage flowers. Tulips that have a tinge at the bottom of the cup, should not on any account whatever be seeded, as all Tulips raised from seed partake more or less of the parent root. Maddock recommends breeders as the most proper to seed from, and I agree with him in some respects, as the length of time the bulb remains in the ground after the tulips are got up in order to ripen the seed, is apt to spoil one in a fine rectified condition, by causing it to come what is termed dirty, that is, with too much colour. But it rarely happens that you possess breeders of the fine varieties, and of course you must in this case run all risks. To remedy this defect of too much colour, I find that by taking them up the following year, when in bloom, and placing them in sand in a shady place, has a great tendency to counteract this superabundance of colour.

On Sowing. Much difference of opinion exists, as to the proper season for sowing the seed. Some Florists sowing at the same time they plant their bulbs, and others in April. I find by experience the best time is in January. The method I adopt is to fill Carnation pots with good rich soil, and plant my seeds, (instead of sowing) edgways, and slightly covering it with soil, by so doing the seed will better force its way through the soil, than if sown promiscuously, as each seed will in all probability lie flat, which renders it less likely to force itself through the soil. Having thus disposed of my seed, I plunge the pot in a cold frame until the latter end of April, when I again plunge them in the open garden. I have also placed the pots in the open garden after sowing the seed, but I have generally lost one half by the frost and the wind by being unprotected; I am of opinion if seed is gathered and hung up in a warm room for a few days, and then sown, a year will be gained by that means. The seed will be ripe early in August, and if sown as directed above, no doubt they will come up in three or four weeks. They will then have

two months at least to form their bulb, and if at the latter end of October, they are placed in a green house or cold frame, they will grow a little more. They will die downwards in December, and remain buried in the soil until the time your other roots begin to make their appearance, when I have no doubt they will also make theirs. Each seedling must be taken up at the end of the second year, and planted the same as you do your offsets. Each pod of seed ought to be sown in a separate pot and marked, that if you raise a good variety you may be enabled to trace its origin. Each seedling ought to be kept in a separate box or paper bag with the increase, so that when it blooms, if not possessed of good properties, you can throw the whole produce away, and if on the contrary, it should be a good one, you can then tell how many you have of it. Breeders which have bad bottoms should not be thrown away if they have yellow filaments in a bizarre and white in a rose or byblomen, as they generally break clean, but if the filaments are bad, there is not the least probability of its breaking out. Some breeders have good bottoms, &c. yet have tinged filaments, their imperfections detract from the value of the Tulip, as nothing looks so well in a good formed Tulip as the filaments to correspond with the rest of the properties.

Seedlings generally bloom the fifth or sixth year, Some make their appearance in a rectified state, and others of a self-breeder colour. In judging of the properties of breeders at Floral and Horticultural Meetings, the cup must be good as well as the bottom, and the colour, if a Bizarre, a dark chocolate, or brown. Polyphemus and Charbonnier Noir breeders, generally take the first prize in this Class. The rose breeder should be of a bright colour. The Queen Boadicea breeder, (or as it was named by some one who sold it as a new variety of Sherwood's) Duchess of Newcastle, ranks the first, having put aside the Glaphyra breeder altogether. The Byblomen breeders should possess, in addition to cup and bottom a good dark colour. As there are so many varieties of this class, it is impossible to single the best out.

Many Florists pretend to have a secret method of breaking breeders into colour. There is none better than the following. After you have grown your seedlings up to maturity, that is a blooming state, plant them for one year twenty or thirty miles distant from where they were raised, and the next year plant them at home in maiden soil, and by so doing you will break

several into colour. I have tried old mortar pounded fine and riddled through a five riddle, and about one-third of this mixed well with three-fourths of maiden soil, has broken the several breeders very fine. I have also taken them up in bloom, and placed them in the same: this also has answered my expectations the following year. Change of soil, is after all, the best means which I have tried yet.

I had omitted to mention in its proper place that each Tulip seed will produce a distinct variety, and that many of them in a breeder state, cannot be distinguished from each other, but when broken have proved distinct varieties; this shews the necessity of keeping each root separate as before mentioned.

ARTICLE. II.

ON THE CULTIVATION OF THE *LYCHNIS FULGENS*,

BY META.

THE *Lychnis Fulgens* does not appear to be so well known, or so generally cultivated, as its beauty deserves; and finding no other notice of it in the Floricultural Cabinet, than an inquiry in the first volume, as to its preservation during the winter, I forward the following observations on its culture, being a pan which succeeded well last year.

In the beginning of March the seeds were sown in a light rich soil, about six in each half-pint pot, and then placed in a gentle hot-bed: the seeds did not germinate quickly, and not more than half came up. (I think it does not seed freely, as I see none advertized in your various lists for this year.) When the young plants were about three inches high the pots were removed into the greenhouse, and the seedlings were never disturbed, as I have found by the experience of the previous year, that they were very impatient of removal. When they seemed to require it, the soil was carefully taken out from the top of the pot, and replenished with a mixture of one third loam, one third peat, and one third leaf soil: they were sparingly supplied with water; with this method of treatment, they flowered beautifully the following July. After flowering they only required sufficient water to enable them to perfect their seed, and to prevent the soil from baking, and then were suffered to subside into that state of rest, which all tuberous roots require. Before winter the roots had

grown considerably, and were then repotted in a mixture of two parts loam, one part peat, and one part leaf soil: they were placed in a dry cool part of the greenhouse, and have now (Feb. 3d,) sent out three or four stems from each root, those from last year's seedlings being three inches high, those from the previous year's six or eight.

In the summer of 1836, I put out into the open border, one or two seedlings raised the previous spring, but the transplanting checked their growth, and the stems died down. The root of one however survived, though totally unprotected, and flowered in the summer of 1838, though not so finely as those kept in pots in a cold frame during the winter, and removed into the greenhouse in spring.

Loudon in his *Hortus Britannicus* states the *Lychnis Fulgens* to be a native of Siberia, introduced into England in 1822; it may therefore be supposed hardy enough to be ranked amongst our border plants, but its beauty will well repay for a little extra care.

I think probably, seeds sown in the border and protected by a glass until frosts are over, would succeed, and during the winter, some manure, or coal ashes over the roots might be sufficient, but as mentioned before, one plant withstood the trying spring of 1837, without any protection whatever. Being a tuberous root, the best time for dividing it would be the autumn, or before potting it for the winter.

I would scarcely believe the report I received with any seedlings in 1836, that the colour was equal to that of *Verbena Melindrus* while the blossom was an inch across: but this far from being an exaggerated description, was quite correct as to the brilliancy of the hue, and below the truth as regards the size of the flower, mine being about two inches across; and when two or three were open at the same time they were almost too dazzling to look at, for long together.

ARTICLE III.

ON THE CULTURE OF GLADIOLUS PSITTACINUS.

BY W. W.

HAVING derived much useful instruction from the perusal of the *Floricultural Cabinet*, which I have taken in from its commencement, induces me to request you to insert, in an early number,

the particulars of the culture of the *Gladiolus Psittacinus*. May fine large roots, when planted in the open ground, be depended on flowering? if so, at what time should they be planted? If potted and raised in a hot-bed, do they require much or little water? in short, should they be well watered under all, or any circumstances? I presume that the full grown roots should be taken up in the autumn: as they do not die down early, perhaps the end of October would be the best time.

As to the young roots I observe that they come up luxuriantly in the spring when left in the ground; I succeeded tolerably well with these roots last year by raising them first in a hot bed, being potted the beginning of March, then placing them in a greenhouse till the beginning of June, when they were planted in the borders; but they did not quite realize my expectations, having seen them growing more luxuriantly at the Horticultural Gardens, therefore I am desirous of knowing the best method of proceeding with them. Some roots that I left in the ground through the winter, rotted, at least the hearts dwindled away, sending up an immense quantity of young ones in their places.

It would be desirable to grow them without first raising them in a hot bed; but of those that I have planted in the ground few have flowered. I believe they require a sunny situation.

Clapham, 12th January, 1838.

ARTICLE IV.

ON THE RELATIVE MERITS OF IRON AND WOOD ROOFS.

STOVES, GREENHOUSES, &c

(CONTINUED FROM PAGE 72)

HAVING, I think, fully shown, the advantage possessed by wood over cast iron in those very essential points; the better growth of plants, and the saving of fuel, glass, and labour; I shall now add to these observations a few words on the various systems of heating houses; that is to say, with common flues with steam, and by the circumvolution of hot water. The last named method is now becoming very general, and is admitted by all scientific men to be the best, because it is the safest; the most certain, and no doubt when perfectly fitted upon a good principle, it is also the most economical as regards the expenditure of fuel and

the application of labour. Entering, therefore, on this all-important subject, I shall confine my observations in the first place to advantages of hot water over steam, which are, in my opinion, very great, particularly where coals are expensive; for, to generate steam an enormous consumption of coals, or oven coke, which is nearly as expensive, is indispensably required, as a weaker fuel will be found of no avail. This is the first evil of the steam system, and the second is, that a man's time must be nearly, if not wholly employed in affording that constant attention which is necessary to keep up the fire. Then in the third place, there is a considerable loss not only of time, but of fuel also before the pipes become filled with steam. This is a very important part to which, perhaps, due attention has not been paid, for it may not be generally known that steam travels through the pipe in a time no shorter than it requires to make them nearly as hot as itself; for steam, the instant that it comes in contact with a body colder than itself becomes condensed, and its onward motion is of course impeded. Again, the moment the fire becomes too weak to keep the water at the boiling point, so that steam may be generated, it immediately ceases to furnish heat to the pipes; consequently the pipes soon become cold, and this is the fourth evil of heating by steam, which is avoided by the use of hot water; for the instant the fire is ignited and the water gets warm, the particles of the fluid are set in motion, and circulation in the pipes commences, and continues until the whole of the fuel is consumed, or so long as there remains any heat in the furnace, in the bricks, or in the boiler. Still further, I have found two pipes each four inches in diameter when filled, the one with water at a heat of 200 degrees, and the other with steam, the one with the hot water would contain a much greater and more enduring body of heat than one filled with steam; and I have no doubt that if, when both pipes are heated up to the stated temperature, the fires were suffered to expire, the pipe containing steam would cool as much in one hour as the hot water pipe would in six or seven hours. These facts are stated from accurate observation, frequently repeated, and from exact calculations, very severely tested; they may, therefore, be considered to demonstrate in the last place, the decided advantages which the plan of heating by the circumvolution of hot water passes over the rival system of heating by the diffusion of vapor. To the superiority of the hot water plan, as to economy, both of fuel and

labour, I may be allowed to bear witness, for during the last fifteen years I have devoted the best energies of my mind to the subject. Throughout that period I worked four steam boilers, and had under my own eye the direction and application of no less than six of the most approved systems for raising temperature by means of hot water. This extensive experience and the opportunities it afforded of drawing an impartial judgment on the merits and defects of all the different systems, added to a natural taste for, and love of experiment, directed me to the construction of my economic egg shaped, wrought iron boiler, which has not only received the direct approbation of every engineer who has witnessed its operations, but is considered by them and all who have adopted it, as the most simple and economical of all the plans as yet submitted to the public. So confident am I in its superiority, that I always offer a guarantee to all who employ me to fix it, that I will keep it in repair and take the responsibility of its acting properly for three years, provided that it be fairly used. On such conditions, those who favour my invention cannot run much risk nor entertain any apprehensions as to its efficacy, for surely three years will afford them ample time to decide upon its merits and advantage. Its chief features are its expanse and the economy of its arrangement, &c.

Aware as I am that any information from practical men, explanatory of the cause of improper working in so many hot water apparatuses, will be acceptable to all gardeners who have the management of them, and who peruse your truly valuable publication. I will briefly state a few of the principal causes to which failures are attributable; among which none are more difficult to overcome by persons unacquainted with the hydradynamic principles on which the action of hot water is regulated, than the accumulation of air in the pipes. Indeed, unless proper arrangements are made for the escape of the air which is evolved from the water when at a boiling point, no apparatus can act properly. Now, from some accidental cause, even in the best constructed apparatus, this air may collect and lodge in the corners or angles of the pipes, particularly when they have to rise and fall; this should be particularly attended to, as the want of due regard and necessary precaution in this particular, is in my opinion the principal cause of the many failures with hot water, and the reason why this description of apparatus is sometimes spoken of unfavourably; for I have invariably found from practi-

cal experience that water will not circulate beyond the point where there is an accumulation of air, and the more powerful the attempts made to remove the obstruction by increasing the strength of the fire, &c., the more likely is the apparatus to work improperly, and to cause an overflow of water in the supply cistern. Therefore, as soon as it is discovered by the gardener or person having the management of the fire, that the water does not circulate regularly, he should trace the water by its warmth along the pipe to the place where he finds the metal cold; and then in the next bind, or angle, should he not find an air tap, I should recommend him to procure a blacksmiths drill and to have a hole made in the pipe, when he will find the air to pass off rapidly and the water to follow instantly. Then, should he not be prepared with an air pipe, a small wooden plug would suffice until an opportunity offered to fix one properly; as in all probability it might be many months and perhaps years: if the cistern be carefully and continually attended to, before such an accident could occur again at that particular joint or bend, I would, however, strongly recommend that in every apparatus ample provision should be made for the escape of the air, at every bend where it is likely to collect or lodge, for I have witnessed during the time I had the management of six systems of hot water, that from some unknown cause, an apparatus which had worked properly for one or two years, would suddenly get out of order, when, on tracing the pipe as before described, as far as I found it warm, I have then, on drilling a hole at the first turn or bend where the pipe began to feel cold, found an accumulation of hydrogen carbonic acid gas, the heaviest of all the gasses lodged in the angle, and as soon as this was allowed to escape, the apparatus worked as regularly as usual. To remove this difficulty which to persons unacquainted with the cause of the obstruction, would appear formidable, nay almost insurmountable, not more than ten minutes space was sacrificed; and on interrogating the man who had the management, as to whether he had allowed the cistern to fall below the proper level, I discovered that the derangement had been caused through his negligence and inattention, in having suffered the water to sink below the level of the top pipes, which of course left a vacuum for this foul air. I would therefore advise all persons, when not using the apparatus, either to draw the whole of the water off, or to keep the cistern as full as when in use; this precaution will prevent the air from

collecting, but when the boiler is filled again, they should be careful to leave the air taps open, until the water begins to flow out, or, till the boiler is full, to prevent a repetition of the inconvenience. There is also another highly important arrangement connected with hot water apparatuses, property of the metals, which should be attended to with great care. I mean the allowing of a sufficient longitudinal expansion for the pipes on their becoming hot; as it should be born in mind, that iron pipes when heated to 200 degrees, will expand nearly 2 inches in a length of 100 feet, and as a proof of the necessity of attending to this part, I may relate a circumstance which fell under my observation. A few years ago a nobleman's conservatory in Hampshire was heated with hot water, at the expense of between three and four hundred pounds, and the pipes of the boiler were introduced through the stone that formed the foot-path, in which holes were cut, just large enough to admit a 4 inch pipe, but not of sufficient diameter to allow, for the expansion of the metal; and I well remember, that in consequence of this oversight in fourteen or fifteen different situations where the pipes had to pass through the stone, the joints burst. In each of the 80 feet lengths of pipe, which amounted to about seven or eight lengths altogether, one third of the joints burst, which had only been used three or four times at intervals, it continues to crack to this hour and will do so until they allow room for the expansion of the pipes where they pass through the stone. Having thus given a few brief instructions for the management of hot water apparatuses, and knowing there exists a great diversity of opinion relative to the quantity of water a boiler should contain, and of the dimensions of the water way both in pipes and boiler, so as to secure a regular and lasting temperature, I hope it will not be considered presumptuous in me to offer a few observations on that subject, and leave the impartial reader to decide the question. It is natural that every constructor of hot water apparatus should be prejudiced in favour of his own peculiar plan, the child of his own mind; here it is that the prescribed dimensions of the conducting pipes, vary from $\frac{1}{2}$ an inch to 5 or 6 inches in diameter, according to the different plans of different individuals. I shall merely give my judgment on the proper sizes, without commenting on any peculiar plan. It is my opinion that hot water apparatus, to answer all the desired purposes, should be so constructed as to avoid either objectionable extremes; since

pipes of too large or too small dimensions are equally to be avoided, and this for reasons which I could easily adduce, were it not that I desire on this occasion to confine my remarks to boilers formed of a series of pipes, varying from half an inch to two inches, which I admit have a great advantage over boilers containing large bodies of water, in as much as they become hot much more quickly, but then it must be recollected, that the larger body when once heated, will remain hot twice or three times as long as the other. And I have proved by observation that a 4 inch pipe, which contains double the quantity of water which a 2 inch pipe is capable of receiving, in a house of the same temperature, will retain its heat for more than double the length of time. Moreover, when boilers are used that have such small water way and small pipes, they require more attention, and cannot be left at night with the same safety as boilers and pipes containing larger bodies of water, seeing that the former cools so much more rapidly than the latter. Nevertheless, to err in the other extreme, by having boilers and pipes to contain very large quantities of water, would be a great waste of fuel and by no means calculated to answer to the satisfaction of all parties, so well as a boiler and pipes of a medium size; it is my opinion, therefore, that in neither boiler nor pipes should the water way be less than 3 inches, nor more than 4 inches, and the boiler should be so constructed without complication as to expose the greatest possible surface to the action of the fire, this would be found the most economical shaped boiler for fuel and effect, for I have always remarked, that the great object of all persons who heat their houses with hot water, is the saving of fuel, &c., which is very considerable, when compared with the expense attendant on a badly constructed flue, moreover, an opportunity is offered of heating several houses at the same, or very little more expense: this I have always considered of the greatest importance, particularly, when a gentleman's establishment is situated a great distance from coal mines, and in all my arrangements with hot water I have always continued to have the body of water in the pipes which run through the house, as it is there that the gardener requires a permanent and lasting heat, this it is that induces me to advocate the use of 3 inch and 4 inch pipes. Moreover there are great objections to the use of small pipes varying from half an inch to two inches, particularly when the boiler (as is the plan of some) is formed of a series of pipes, in such cases their

interior become in course of time "furred" up, from the incrustation formed from the depositions of the various lathy matters held in solution by the water, which naturally causes an accumulation of alkaline earths, &c., &c., which in time closes up the water way. I have thus freely expressed my opinion on the demerits of pipes of small calibre; but it must not be thence inferred that I shall err on the other extreme, as that would be attended with much sacrifice of fuel to the proprietor, and great inconvenience to the gardener. For if boilers and pipes are used capable of containing unnecessarily large quantities of water, there will be a great waste of fuel before any heat is communicated to the house, and, perhaps, a valuable crop of fruit or plants may be destroyed through the gardener not having a proper command of heat, in order to prepare against those alterations in the weather so frequently sudden and unexpected in this changeable and uncertain climate.

I have found in the course of my experience and observations, that more especially, in the months of October, November, and December, but with less frequency at all periods of the year, that up to the hour of 12 o'clock at night, rain may fall in torrents and the gardener may naturally conclude, that during the night, no fires will be required, either for greenhouses or conservatories, but how great must be his trouble and surprise to find in the morning eight or perhaps ten degrees of frost. Now this trouble and inconvenience I have frequently experienced; therefore for the benefit of all parties and the protection of plants, &c., I beg to repeat here the opinion I have already given, that, for an apparatus to answer all purposes, boilers with a medium size, with water ways not less in any part of the boiler than three inches and not more than four, will give the gardener a sufficient command of heat, and afford him an opportunity of protecting the perishable property entrusted to his care, without subjecting himself to reproach, which is too frequently unjustly heaped upon him for loss of property, through circumstances, over which he could have no controul. For to limit a gardener to means, when much is expected, can only be compared to setting a man to dig who has neither legs nor arms.

ARTICLE V.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

(Continued from page 64.)

But it requires considerable ingenuity to hinder these elevations from having the appearance of artificial ones, which would make them as ridiculous as a circular lake on a lawn. As the removal of earth is attended by the expense of labour only, this is one of the most advantageous manners of laying out money in the formation of a shrubbery, since five feet lowered in one part and raised above will give a slope or bank about double that height. A considerable effect will thus be obtained; for in a flat country a small elevation gives a great command of prospect, and adds itself considerably to the beauty of a landscape, especially when planted with lofty growing trees, as larches and pines. An undulating appearance may be given to level ground, by judiciously planting the trees and shrubs.

The too general error of planting close to the dwelling-house should be avoided; for although such a plantation may have a pretty appearance in the infant state, a few years' growth will cause it to cast a gloom over the apartments, and keep off a free circulation of air. Besides, as plants give out a noxious air in the evening, it should be more particularly guarded against in this moist atmosphere.

The training of trees to the walls of houses is also objectionable, as they cause damp, harbour insects, and collect leaves and other substances that become offensive by their putrefaction, whilst the view of the plants themselves cannot be enjoyed from the windows. However, all offices, out-houses, and unsightly buildings, may be covered with vines and ornamental climbers.

However small the plantation be, those abrupt terminations which mark the limits must not be permitted. The shrubbery should harmonize with the surrounding scenery, and appear to blend with it into one.

The plants which stand nearest the dwelling must be of the dwarf kind, and of the most beautiful sorts. The trees, also should be selected so as to correspond with the style of building. The villa shows best when surrounded by light ornamental trees, such as the birch, the acacia, the sumach, the laburnum, and cypress: and a clump of poplars may sometimes be introduced, so

as to break the line with good effect. The cottage may have more rustic trees; while to the castle belong the oak, the ash, and the pine, the mansion admits of all at their proper distance, and in suitable situations.

One of the most important things in planting is to attend particularly to the shades of green, especially where the view from the house or lawn catches the trees. Flowers which Pliny calls the joys of the trees, continue but for a short period, in comparison to the duration of foliage; therefore, the picture should be formed by judiciously contrasting the greens. Even the effect of perspective may be considerably increased by the proper arrangement of hues. Trees whose leaves are grey or bluish tint, when seen over or between shrubs of a yellow or bright green seem to be thrown into the distance. Trees with small and tremulous leaves should wave over or before those of broad or fixed foliage. The light and elegant acacia has a more beautiful effect when it's branches float over the firm and dark holly or bay-tree. In some situations the bare trunk of trees may be shown; in some, it should be concealed by evergreens and creepers. Vines, also, may be suffered to embrace it, and form natural festoons where the extent of ground will allow of wilderness scenery. In all situations, nature may be assisted, but should never be deformed by clipping; for ingenuity ought to be employed to disguise art, not to expose it.

The beauty of plants cannot be displayed when they are too much crowded, as they are then drawn up into unnatural shapes. Therefore, the oftener open spaces can be admitted, the more will the shrubs exhibit themselves to advantage, and the more cheerful will be the walk; for it becomes insipid and gloomy when confined for any distance. The winds also claim our attention. Care must be taken so to arrange the position of the trees, that only those gales which are most congenial to the growth of particular plants should be allowed access to them.

The undulating appearance of a plantation will be considerably assisted by a gradual progression from the lowest shrub to the highest tree, and again, from the highest to the lowest. But as some shrubs will not flourish under certain trees, their respective situations demand consideration. These shrubs may indeed exist under such unfavourable circumstances, but their unhealthy appearance will never be pleasing. Where the shade of any tree is too powerful for laurel or privet to thrive, ivy may be planted

with advantage, if it be desirable to cover the ground with evergreen.

In proportion as the shrubbery or plantation recedes from the dwelling, it should become more rural in its character, more especially if the house be in the cottage style. Here climbers and such plants as require the support of others, are to be introduced. The most delightful groups in a pleasure-ground are generally those where nature, freeing herself from the shackles of art, depends only on her own assistance for support. Her beauty is chiefly to be seen there where her various creations combine spontaneously, and without restraint.

The means by which these plants raise themselves up, so as to offer their flowers to the sun, are as various as they are curious, and they seldom blossom whilst trailing on the ground. The ivy and bignonia ascend by the help of little fibres, which fix themselves to the bark of trees or crevices in walls so tightly, as to render their disengagement a difficult thing to be accomplished without injury to the trunk or building they are attached to. The honey-suckle like the hop, twines itself spirally around the trunk or branches of trees, and often clasps them so closely, as to make an impression on the hardest timber. Others, as the vine and passion-flower, rear themselves by means of corkscrew tendrils, which hold so fast, that the strongest winds seldom disunite them from their support. Some plants climb by means of a hook in their leaf-stalk, or have a kind of vegetable hand given them, by which they are assisted in mounting, as the pea and several others.

To return from this digression.—The sombre, gloomy walk of yew, cypress, or holly, should lead to the spot from which there is the most beautiful prospect, or to the gay parterre where Flora has diffused her flowery beauties; as the contrast, particularly if sudden, adds greatly to the cheerfulness of the terminating view.

Bad taste is seldom more conspicuous than when we see trees or plants marshalled in regular order and at equal distances, like beaux and belles standing up for a quadrille or country dance. Where the situation will permit, four or six lilacs should be grouped in one place, and as many laburnums in another so as to give effect in various parts by a mass of colour.

The guelder rose should appear as if escaping from the dark bosom of evergreens, and not a plant should be set in the ground

without adding to the harmony of the whole. A shrubbery should be planted, as a court or stage dress is ornamented, for general effect, and not particular and partial inspection. Boldness of design, which seems to be more the offspring of nature and chance than of art and study, should be attempted; but though boldness is what the planter should aspire to, all harshness, or too great abruptness, must be avoided, by a judicious mixture of plants whose colours will blend easily into one another.

The most beautiful shrubs should occupy the most conspicuous and prominent places. For instance, a projecting part of the plantation should be reserved for the purple rhododendron, the flaming azalea, and other bog plants. Here, it must be observed, that unless proper soil be provided for these American plants, the cost of the shrubs will be lost, as they will soon decay when not placed in earth congenial to their nature. With these shrubs may be planted the hardy kinds of heath, as the same soil suits both species. With respect to evergreens, considerable judgment is required, in order to relieve their uniform appearance during winter. This may be done, by skilfully arranging different kinds, and those with variegated leaves, or such as retain their brilliant berries during the cold months.

However, a well planted shrubbery depends not so much for its beauty on the expense or rarity of the plants it contains, as on the selection of trees and shrubs which succeed each other in blossoming throughout the year, or whose various-coloured fruits grace them for the longest duration of time. We shall, therefore, not dwell upon those plants alone that are the ornaments of the summer season; but also point out some that will contribute to the gaiety of morning and evening of the year; so that the gloom may be banished at all time as much as possible from the grove, and nature's repose shortened between the plaintive good-night of autumn, and the cheerful good-morrow of spring.

The hazel and filbert are amongst the number of those trees that blossom the first; and although their crimson female flowers, which appear about the middle of January, make but little show, yet they should have a place in the shrubbery to display their catkins, that hang with such peculiar grace from the branches, at a season when scarcely any other plant or shrub offers a flower, excepting the rose mary.

(To be continued,)

PART II.

LIST OF NEW AND RARE PLANTS,

*Noticed since our last.*1. MORNA NIVEA. *Snowy.*

[Bot. Reg. 9.

ASTERACEÆ SYNGENIA POLYGAMIA ÆQUALIS

An interesting half hardy annual, raised by R. Mangle's, Esq. from seeds sent from the Swan River colony. The present species very much resembles *M. nitidia*, excepting the flowers, which are white, whilst those of the other species are yellow. The flowers of this genus are of the character, usually termed everlasting, keeping for years after being gathered, which gives additional interest to their neatness. The flower stems rise to about half a yard high, produces a profusion of blossoms during the summer and autumnal months.

2. PASSIFLORA NIGELLIFLORA. *Nigella flowered Passion Flower.*

[Bot. Mag. 3635.

PASSIFLORIEÆ. MONODELPHIA PENTANDRIA.

Mr. Tweedie discovered this species at St. Jago d'Estero in 1835, and sent it to the Glasgow Botanic Garden, where it bloomed in the stove during last summer. The plant much resembles *P. citiata* or *gossypifolia*. The flowers are white, each about an inch and a half across.

3. THYSANOTUS PROLIFERUS. *Proliferous.*

[Bot. Reg. 8.

LILIACÆ. HEXANDRIA MONOGYNIA.

This very singularly beautiful greenhouse perennial was raised by R. Mangle's, from seeds sent from the Swan River colony. The flower stem rises about two feet, and bears two or three umbels of its singular fringed flowers, the umbels being two or three inches apart up the stem. Each umbel contains from eight to a dozen blossoms, and a blossom is near an inch across. The petals are of violet purple, having a lilac line up the middle of each. The edges of the petals are densely feathered with fringe. It is a very neat and desirable plant, well meriting a place in every greenhouse, *Thysanotus*, from *thusamotus*, fringed, referring to the edges of the petals.

4. ARISTOLACHIA SACCATA. *Pouch-flowered Birth Wort.*

[Bot. Mag. 364.

ARISTOLECHIEÆ. GYNANDRIA HEXANDRIA

This very singular flowering plant is a native of Silhet, and was sent from the Calcutta garden in 1829, to the royal Botanic Garden Edinburgh, where it bloomed last September. The plant is a twiner, growing to a considerable length. The leaves oval, heart-shaped, from a foot to fifteen inches long, and four to six broad. The singularly formed flowers are produced numerously in racemes; each flower is about five inches long, pouch-formed, the tube turning upwards from the middle, and bending parallel with the other portion of the tube, the inside of the tube is a whitish yel-

low. The mouth and throat of the tube of a bright golden yellow, with an edging of deep purple. The outer side of the tube is of a rosy white and pale purple.

5. *BORONIA CRENULATA*. *crenated leaved.*

Bot. Reg. 12.

RUTACEÆ. OCTANDRIA MONOGYNIA.

A very handsome flowering species, which is a native of King George's Sound, where it was discovered by Mr. Menzies. It bloomed in the greenhouse of Messrs. Lodiges's at Hackney, and forms a neat bushy plant, with deep green foliage. It produces a profusion of flowers of a bright rosy-red colour. Each flower is about half an inch across. This species deserves a place in every greenhouse. Like the rest of the species, it requires to be grown in an airy, and light part of a greenhouse. The most suitable soil for all the tribe is a sandy peat, using a free supply of drainage, and frequently shifting each plant into a pot a size larger. If overpotted they often die. Baranea, so named in compliment to Boranes, who was servant to Professor Afzelius, this faithful servant went with his master to Sierra Leone, where he died.

6. *COMUS SCABIOSOIDES*. *Scabious-like.*

Bot. Reg. 12.

ASTERACEÆ. SYNGENESIA SUPERFLUA.

A native of Mexico, from whence seeds were sent to J. F. Dickinson, Esq. and by that Gentleman presented to the Horticultural Society of London, in whose garden it bloomed last year. The flowers are produced numerously, each blossom being about an inch and a half across, of a deep crimson inside with the stamens, forming a yellow eye; outside of a deep rosy red. It is a very handsome species, well worthy a place in every flower Garden. It is supposed very probably, that the flowers of the genus will become double, similar to the Dahlia. There are several other species of this pretty tribe, not yet introduced into this country, with pink, bright yellow, or deep purple flowers. There are now annually importations of Mexican seeds into this country, we may therefore conclude that seeds of these beautiful plants will soon be introduced.

7. *ERICA CHLOROBOMA*. *Green tipped Heath.*

[Bot. Reg. 17

ERICACEÆ. OCTANDRIA MONOGYNIA.

This very pretty flowering species is cultivated by Mr. Young, nurseryman Taunton, Somersetshire, where it has bloomed. The plant is of an erect habit, and the flowers are produced upon the young shoots in vast profusion. The flowers are near three quarters of an inch long, of a beautiful crimson colour, having a green tipped end. They hang pendulously along the shoots. It is a very neat and desirable species.

8. *ERICA FLORIDA* ; var. *CAMPULATA*. *Drooping round headed Heath.*
(Bot. Mag. 3639.

This very beautiful flowering heath is cultivated in the superb collection at Bothwell Castle, where it was raised from seed by the very skillful gardener, Mr. Turnbull, in 1835, and though but two years old, the plant is near a yard high, and has produced a profusion of blossoms, of beautiful rose colour, and their campanulata form, show them prettily to view. Each blossom is about a quarter of an inch long, and the same at the mouth. It is a very desirable variety of this interesting genus.

9. *GOVERIA LILIACEÆ. Lily flowered.*

(Bot. Reg. 18.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA. *Synonym MAXILLARIA LILIACEÆ.*

A native of Mexico, growing under the shade of trees, or sometimes grows over their roots. It is a tuberous plant, having the habits of *Bletia*, the flower stem reaching about a foot high, it is sulphur white, spotted and streaked with reddish-purple. The first notice of this plant was by M. Hernandez, who describes it by the name of *Iztactepetzacuxochitl* Icohueyo. The plant is very rare in this country, and probably in no collection but that of George Barker, Esq. of Birmingham.

10. *MAMILLARIA ATRATA, Dark green Cactus*

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ICOSANDRIA MONOGYNIA.

A very handsome flowering species. This truly interesting and singular tribe of plants grown in the celebrated collection of Mr. Mackie of Norwich. The flowers are produced numerous around the top of the fleshy trunk. Each blossom is upwards of an inch across, of a bright rosy red colour, with the anthers forming a yellow eye. The singular form of the plant, and the arrangement of the numerous pretty blossoms contribute to recommend it to every cultivator of this tribe of plants.

11. *PENTSTEMON CRASSIFOLIUS. Thick-leaved.*

(Bot. Reg. 16.)

SCROPHULARIACEÆ. DIDYNAMIA ANGIOSPERMIA.

The late Mr. Douglas discovered this pretty species on the north-west coast of North America, who sent seeds to the London Horticultural Society, at whose garden it bloomed last year. The plant is of a suffrutescent habit, growing a foot high, quite hardy. It is a free flowering species, produced in racemes. Each flower is about an inch and a half long, of a pretty lilac colour. The lower part of the tube is of a bright rose colour. It is a very desirable plant for the flower garden, its dwarf habit, and pretty flowers alike recommending it.

12. *PHILADELPHUS HIRSUTUS. Hairy Syringa.*

(Bot. Reg. 11.)

PHILADELPHACEÆ. ISCOSANDRIA MONOGYNIA.

This species was found by Mr. Nuttall in Tennessee on the rocky banks of French Broad River, near to warm springs. It is a hardy shrub, growing not more than three or four feet high, blooming in the middle of July. The flowers are white, each about an inch across, without fragrance. It grows well in a rocky situation.

ON THE AURICULA.

In the three winter months from the 21st of November to the 21st of February, Auriculas do not require much of our care, beyond watering them occasionally, plucking off the dead leaves and covering them with mats, or a little coarse hay litter during the severe frost; and this covering ought more particularly to be given them in February, because their trusses then begin to appear, which, if frozen hard, will be detrimental to the bloom. They want very little water in the winter, and seem to be best when kept rather dry than otherwise in December or January. Early in February, if the weather is mild, you may give them a day's gentle rain, and this may be repeated, if necessary during the month. You may now give them manured water twice, and do the same again in March, allowing a week between each watering. Top dressing is requisite.

PART III.

MISCELLANEOUS INTELLIGENCE

QUERIES.

ON PRODUCING DWARF COCKSCOMBS.—I shall esteem it a great kindness if you, or any of your correspondents would give me the particulars of a mode of treatment, or the best method of producing dwarf cockscombs, so as to retard the protrusion of the flower stalks, so that they may become of greater strength. I have for several years followed the rules laid down in Abercrombie's Practical Gardener, but invariably had them drawn up from nine to fifteen inches in height: if you or any of your correspondents would be kind enough to inform me through the medium of your valuable Cabinet how they may be prevented from being drawn up, likewise the distance they ought to keep from the glasses, will be conferring a favour on

A NEW SUBSCRIBER.

ON SOWING ANNUALS.—Being a great admirer of annuals, and as the season for sowing them is approaching, I hope you will devote some pages of your Cabinet to the method of cultivating them with the greatest success.

I shall be glad to know the soil that best suits the generality of those recommended in your lists. And it would be very useful if in the list you are giving you would distinguish those which are improved by being transplanted; and on the other hand, those which are the better for being allowed to blow where they have been sown.

Can you inform me how it is that seeds, although carefully saved from the best flowers, (as of Asters and Marygolds, for instance) nevertheless produce inferior flowers the following year? Am I right in attributing the mischief to bees, of which great numbers are kept in my neighbourhood?

Will you inform me also how to prevent double Polyanthuses from losing colour and becoming single—a calamity which occurs in my garden?

AN AMATEUR.

ON A FLOWER AND KITCHEN GARDEN.—A Subscriber will be very much obliged to the Editor, if he will in his next number mention what he considers the best practicable and easy method to give to an intelligent, but not much experienced gardener some instruction as to the general management of a Flower and Kitchen garden, and the best method of growing the different kinds of vegetables, pruning and other ordinary operations.

Is the "Adelaide d'Orleans rose, figured in the Cabinet of last September, a climber? The writer has had two young plants sent him, in pots, which from the character of the stems, &c. appear decidedly of the climbing sort, and not at all corresponding with the figure given in the plant just mentioned. An answer to this query will much oblige

CLERICUS.

ON THE VIEUSSEUXIA, &c.

IN Loudon's "Hortus Britannicus" (about the 22d page), under the article *Vieusseuxia*, several species are enumerated. One, the *V. Pavonica*, (formerly called *Moræa Pavonica*) has a reference to a certain page, in Curtin's Botanical Magazine, where it is figured in its proper colours; and the colour

of the blossom is also put down in the proper column. There is also the *V. Glaucopsis*, (formerly called *Iris Pavonia*) with references to the figure and colour. I last year applied, by means of a friend, at ten different florists' shops in London, for some of each of these bulbs: I received some bulbs, which were called *Iris Pavonia*, they bloomed very well, and proved to be the *Vicusseuxia Glaucopsis*, a very pretty and curious flower. I this year again applied (as my friend tells me) to all the London Florists, who were shewed an extract from Loudon, and also from "Sweet's *Hortus Britannicus*," which agrees with Loudon, and the answer was, that "they were the same." Now, Sir, this is impossible, for neither Loudon or Sweet would give an account of the two different species if there were only one, nor would they give the names, *V. Pavonica*, olim *Morœa Pavonica*, and *V. Glaucopsis*, olim *Iris Pavonia*, nor the colours of the two flowers, nor references to two figures, if they were only one and the same. The *V. Pavonica* is like the *V. Glaucopsis*, excepting as to the colours, the former being, as I am told, very beautiful, as coloured in the plate referred to.

As I presume you, as well as many readers of the Cabinet, must be well acquainted with Loudon's and Sweet's books, and also with these two several species of *Vicusseuxia*, I will feel obliged if some person will have the goodness to inform me, in the earliest Floricultural Magazine, where I can procure some *V. Pavonica*. I have plenty of the *V. Glaucopsis*. In this year's Catalogue of Bulbs, published by Lochhart & Co., Cheapside, there is no mention of any *Vicusseuxia* whatever; but there is *Iris Pavonica*, and the bulbs are very fine and cheap. I had some from them last year and they bloomed well. I believe the London Florists, as they call themselves, are far from being well informed in Floriculture, or there would be no omission of the Genus *Vicusseuxia* in their catalogues; nor would they say that the *V. Pavonica*, and *V. Glaucopsis* were one and the same, with the "*Hortus*" before their eyes, if they possess the books, which I very much doubt.

In "*Aiton's Epitome of the Hortus Reivensis*," page 16, there is noticed "*Morœa Pavonia*, Peacock *Morœa*, coloured in the Botanical Magazine, (Curtis's) table, 1247, brought from the Cape of Good Hope, in the year 1790. I believe this is what I want.

BURRIENSIS.

ANSWERS.

A LIST OF FLOWER AND GARDEN HERBACEOUS PLANTS,—Seeing a query in the December Number of the Cabinet, requesting an early list of Herbaceous plants that will stand the changeable temperature of our climate, I have taken the first opportunity of obliging your correspondent.

Those marked (o) are rock plants.

Acanthus	Aconitum
mollis	pyramidales
spinosus	versicolor.
phinosissimus	decorum
illiciflans	rubellum
Aconitum	Achillea
hycocotum	grandiflora
album	ptarmica
variegatum	ageratum.
Japonicum	speciosa
unicinatum	alpina
speciosum	serrata
virgatum	o calavennæ
formosum	rosea
venustum	nobilis

Adonis
 vernalis
 apennina
Agrostemma
 corrionaria
Alchemilla
 o pubescens
 o alpina
 o sericea
 o hybrida
Aletis
 auria
 farinosa
Alyssum
 o saxatile
 o orientale
 o argenteum
 o obtusifolia
 o tortuosum
 o vernale
 o montanum
Amaryllis
 Belladonna
Ammobium
 alatum
Arabis
 o praeox
 o ambigua
 o alpina
 o albida
 o longifolia
 o crispata
 murans
 o stricta
 o procurrens
 petraea
Aralia
 nudicaulis
 racinosa
Aretia
 o vitalana
 o alpina
Arenaria
 o graminefolia
 o longifolia
 o formosa
 o grandiflora
Aquilegia
 vulgaris
 canadensis
 atropurpurea
 viridiflora
 viscosa
 siberica
 alpina
 formosa
 hybrida
Artemisia *o glacialis*

Artemisia *rupestris*
 o pedemontana
 o caucasica
 o spicata
 o saxatilis
Asclepias
 tuberosa
 syriaca
 nivea
 incarnata
 rubra
Bellium
 minutum
Bellis
 o sylvestris
 o perenis
 o hybrida
Bocconia
 cordata
Borago
 o laxiflora
 crassifolia
 orientalis
Calceolaria
 o fothergillii
Campanula
 o pulla
 o rotundifolia
 o pumila
 neglecta
 tenuifolia
Cardamine
 pratensis
 auraria
Catanache
 caerulea
Centaurea
 glabatifolia
 alba
 macrocephala
 alata
Cerastium
 o grandiflorum
 o tomentosum
 o biersteinii
 o lanatum
Cheiranthos
 o cheiri many varieties
 o alpinus
Chelone
 grandiflora
 digitalis
 glabra
 obliqua
Dianthus
 barbatus
 o latifolius
 o capitatus

REMARKS.

UPON THE CRESTED AMARANTH, OR COCK'S COMB. *CELOSIA CRISTATA*.—The flowers of this plant are so numerous and small, and so closely set together on an irregular and flattish surface, that it frequently looks more like a piece of rich velvet than a vegetable substance. We do not find it placed in floral language, and have therefore given it as the emblem of singularity. It is a native of several parts of Asia, and is common in Persia, China, and Japan, where we are informed it is grown to such perfection, that the crests or heads of flowers are frequently a foot in length and breadth. The most perfect plant of this kind grown in England, was grown by Thomas Andrew, Knight, Esq. and sent by him to the Horticultural Society of London in October 1820, a drawing of this extraordinary flower is now to be seen in the library of that institution; the flower of this extraordinary plant measured seven inches in height, and eighteen inches in width, it was thick and full, and of a most intense purplish red colour.

In producing this singular plant, the first object was to retard the protrusion of the flower stalk, so as to give it as much strength as possible. The compost employed was of the most nutritive and stimulating kind consisting of one part of unfermented horse-dung, fresh from the stable, and without litter, one part of burnt turf, one part of decayed leaves, and two parts of green turf, the latter being in lumps of about an inch in diameter, in order to keep the moss hollow, that the water might have free liberty to escape, and the air to enter. There are varieties of Cockscombs with yellow, red, purple, and white corollas.

FLORICULTURAL CALENDAR FOR APRIL.

PLANT STOVE.—Still support the requisite degree of heat by fires at night, as the plants will now begin to show their blossoms, which should be encouraged as much as possible at this season. Fresh air, when the weather is favourable, is very necessary, and should always be admitted when required, this will greatly assist their flowering, and cause the new shoots to be strong and healthy. This month is the most proper time to pot such plants as may require it, taking great care to use such compost as is congenial to them, and use plenty of drainage. Any that do not require shifting into larger pots may have the surface soil renewed with fresh compost, which will greatly invigorate them, and also add to their neatness. The same directions respecting watering and cleanliness may be observed, as given last month. Still propagate all kinds of exotics by means of seeds, cuttings, layers, or suckers, according to the nature of the different kinds; insert them in pots and plunge them in hot-beds, which will promote their vegetation and rooting quickly and certainly.

GREENHOUSE.—These plants will now require large admissions of air at all times when the weather is mild, for as most of them will now be shooting freely, they must not be kept too close. The plants must now be looked over to see when water is wanted, and let all the plants be properly supplied therewith, as this is now a very necessary article, particularly when they are in the house; be careful of the succulent kinds. Let no decayed leaves or shoots be allowed to remain, but let such be taken off as soon as perceived; and all shoots that are of a weak straggling growth must be pruned more or less, as appears necessary. Let no weed, moss, or litter, be seen on the tops of the pots and tubs; and if any foulness be contracted on the plants, let it be instantly removed. In arch shrubby exotics of any particular kinds; sow seed in pots, placing them in a hot-bed; sow seeds of orange, lemon, &c. for stocks; also propagate by cuttings, layers otherwise, and if placed in a bark bed in the pine stove or hot bed, they will be greatly facilitated in their rooting.

HERBACEOUS PERENNIALS, should now be divided and replanted: also

biennials, as Sweet williams, &c. should be planted for blooming this season.

CUTTINGS.—If old plants of Salvias, Fuchsias, Petunias, scarlet Geraniums, Verbenas, Heliotropes, &c., &c. were saved through winter, and young plants be required for turning out into open beds in the flower garden, &c., young shoots should now be taken off close to their origin upon the old wood, and be struck in moist heat.

ANNUALS.—Hardy kinds should be sown in the borders, &c. (See Vol. I. p. 43 of the Cabinet, where particular directions are given) Tender kinds should have plenty of air admitted to them, whether sown in pots or upon a slight hot bed. (See Vol. I. page 42, of the Cabinet). In order to have the plants of some particular kinds stiff and healthy, they should be planted off into small pots, boxes, or the open border, or slight hot bed, &c., so as to be fine plants for final planting in May. Many kinds of tender annuals, intended to ornament the greenhouse or stove through summer, will require potting off, or if done before this month, probably re-potting into larger pots.

AURICULAS.—Will bloom this month; they will require protection from wet and mid-day sun. The plants will require a free supply of water; if manure water be occasionally given, it will improve the size of the flowers; care should be taken not to apply it over the plant. When the trusses of flowers are formed if there are more flowers upon each than can conveniently expand, the small and centre ones should be cut out, so as to leave about six.

CAMPANULA PYRAMIDALIS.—Offsets or cuttings should now be taken off and be treated as directed in Vol. I, p. 48.

CARNATIONS.—If not planted off last month, should now be done. (See Vol. I, p. 23)

DAHLIA.—Seedling plants should be potted off, one plant into a small or sixty-sized pot. Shoots, and cuttings from old roots should be taken off, where it is desired to increase the kind, and strike them in moist heat.

CHINA ROSE.—Plants of the tender kinds, as yellow, sweet-scented, &c., should now be placed in heat, in order to cause a production of shoots for striking, so as to increase the kinds when desired. (See Vol I, p. 48.)

CHINA ROSE (hardy kinds).—It is now the proper time to bud the varieties of China Roses; do it as soon as the bark will freely rise.

TRIVERANIA COCCINEA.—Roots of this plant should now be potted. (See Vol. I, p. 177 and 223; articles on the culture, &c., are there given)

PELARGONIUMS.—Cuttings now struck will produce plants to bloom at the end of summer. (See Vol. I, p. 88.)

PANIES.—Plants will now be pushing shoots that will be emitting roots. Where it is wished to increase the kinds, it is a very suitable time for doing it, by taking off shoots, and planting them in a good rich soil, shading them for a few days at first.

POLYANTHUSES.—(See Vol I, pages 23 and 132.)

TIGRIDIA PAVONIA.—The bulbs should now be planted in the open bed, choose a warm and sheltered situation

ERICAS, (Heaths).—Cuttings of many of the greenhouse kinds should now be put off. (See Vol. I, p. 48.)

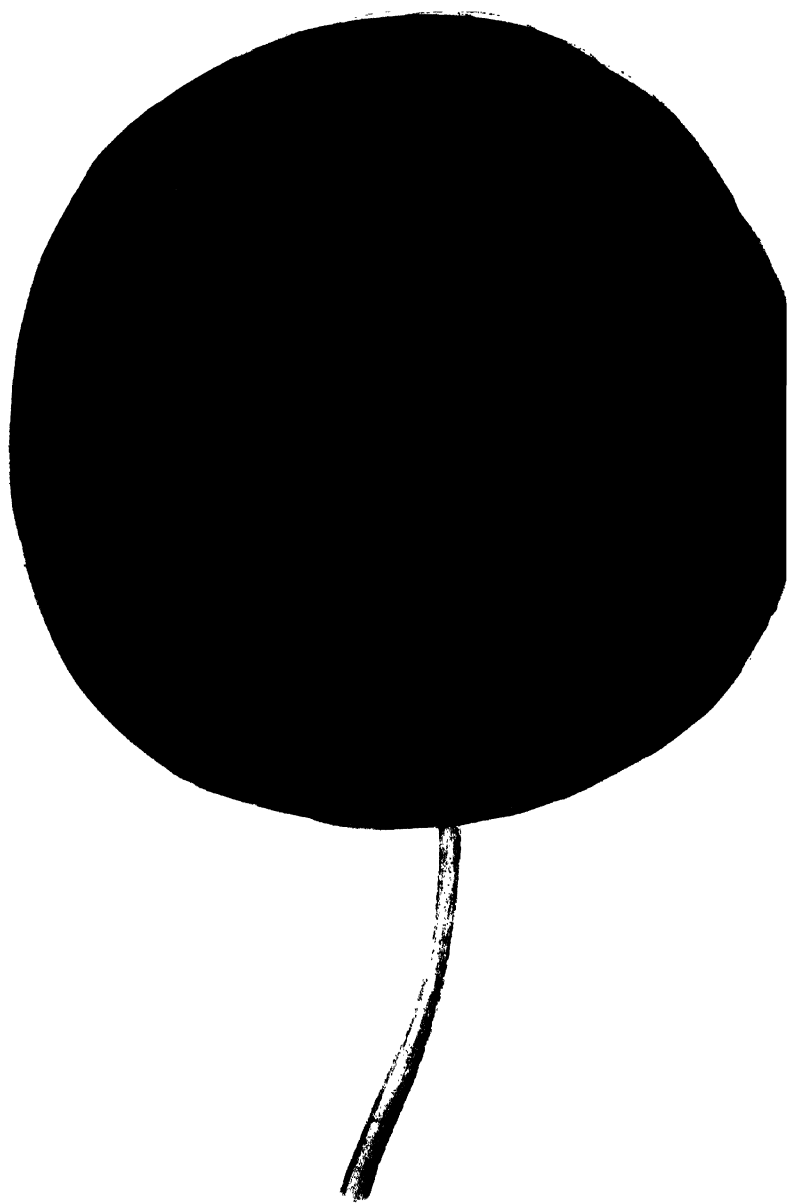
MIGNONETTE.—To bloom from June should now be sown.

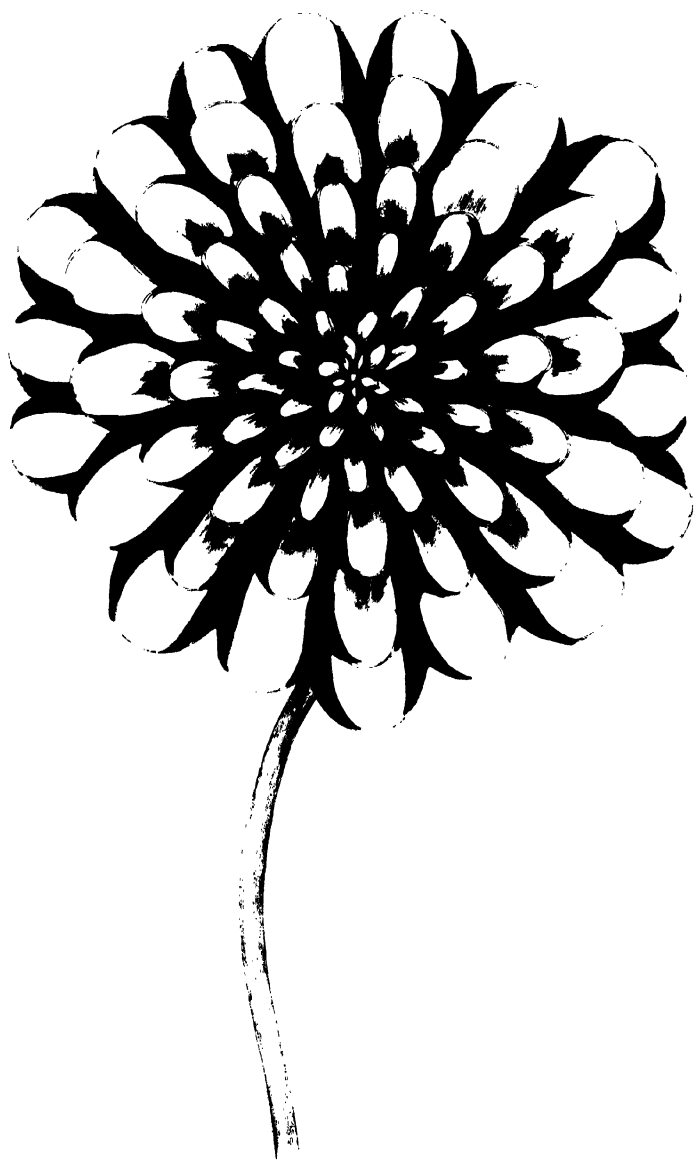
ROSE TREES.—When it is desired to have Roses late in the season, let them be pruned this month. (See Article in Vol. I pages 23 and 206.)

SELF SOWN ANNUALS.—which have stood the winter should be thinned, and where desirable some may be successfully transplanted.

REFERENCE TO PLATE.

The three Dahlias figured this month, have already been announced in our advertising sheets, that we need not add more in this place, than that each kind has been spoken of by competent judges to be equal to the description given of them.





Engelhardt's Daisy



THE FLORICULTURAL CABINET,

MAY, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE TULIP COMPOST.

BY MR. JOHN SLATER, ALBION PLACE, LOWER BROUGHTON NEAR MANCHESTER.

Much difference of opinion has for a long time existed among Florists as to the best compost requisite to ensure a fine bloom of Tulips. I have consulted almost every work upon Floriculture, and I invariably find that manure is recommended in certain proportions, some of them placed at the bottom of the bed, others three inches below the bulb, and a few one-third mixed with maiden soil. Experience has proved that manure has a great tendency to cause Tulips to sport in color and cause them, as is termed by Florists, to be dirty. Preparations amongst Florists are like physicians prescriptions, not always infallible, for I find some varieties require a much stronger compost than others. I remember about nineteen years ago seeing a bloom of Tulips uncommonly fine in the soil, there was not a particle of manure. The garden having been made out of an old pasture field. Grass sods rotted down and broken small is the best compost that can be used.

My plan is as follows. I get grass sods three inches thick from an old pasture field which appears of a rich quality, and has not been disturbed for a number of years. The price in my neighbourhood is twopence per square yard; but latterly, from the land

being sold for building upon, I have been enabled to get a load for two shillings, and in a particular instance, I have given as much as five shillings. I pile them up in a square pile, and after they are a year old or upwards, I brake them up with a spade as small as I can, and afterwards pass them through a wire riddle with holes one and a half inch diameter, the soil being previously dug out of the bed fifteen inches deep. I put that portion which would not pass through the riddle at the bottom of the bed, and the others on the top of this, to within three inches of the surface of the bed, and upon this I plant my bulbs. This plan has been adopted by several gentlemen I could name, one of whom in 1836 won four, and in 1837, six silver cups in addition to other prizes. I have also experienced the same results, but not being a subscriber to the cups, I have of course only won in the classes. In 1837 at a meeting where were exhibited some of the choicest blooms from the first beds in Lancashire, I won three firsts and two thirds, and a *Roi de Siam*, which was unquestionably the finest bloom I staged, was stolen, during dinner, before it was judged. The whole of my bloom that year was good, and the flowers very large. As I said before I find this compost not infallible, I of course use the two following :

For flame varieties deficient in colour and breeder Tulips intended for exhibition

One-fourth old cow dung.

One-fourth old horse dung.

One-half maiden soil.

For those which are dirty, that is, too much colour :

One-third old lime mortar, sifted fine, and

Two-thirds of maiden soil.

In arranging my roots from my book to plant, I place in the box with a root of a breeder a green coloured paper : with a dirty flower, a white ; and with one deficient in colour, a blue. I take care to have a large Carnation pot of each compost, and when I find a bulb with a certain coloured paper, I take out the soil nine inches deep, where the bulb is to be planted, and fill it up again with the necessary compost, by so doing, I generally succeed. Roots of feathered flowers deficient in colouring do not require any other compost than the general one, as it is much better to have them too clean, than otherwise. This compost serves me for two years, the riddlings at the bottom of the bed being frequently mixed with the top soil during the summer

months, makes it equally as good, if not better, than it was previously. I take out about three inches deep of the soil, and cover the bulbs with fresh compost.

If these few plain remarks give satisfaction to your readers, I will send you shortly more articles on Florist Flowers, written from personal observation and experience.

(We feel confident they will, and be glad to have the other articles—CON.)

ARTICLE II.

ON THE CULTURE OF THE RANUNCULUS

BY J. B. W.

It is not my intention to deprecate the practice of professed gardeners, yet so often have I seen them fail in producing a good blow of this pretty little flower, that I cannot forbear offering the following remarks on the mode of cultivating it. Having a good collection of roots in a dry place, I prepare a bed in an open border and south exposure, merely by adding a little of well rotted dung to the common garden mould in the month of October. In February I turn this over to the depth of six inches, and incorporate the old dung well with it. In March I then plant the roots in rows nine inches asunder, and three inches distant in the rows; as soon as they spring, I give repeatedly copious waterings, which of course are not necessary in wet weather. The want of success in the proper flowering of this root appears to depend greatly on the insufficient supply of moisture in the early part of its growth.

When they are in bloom, I shade a little every day when the weather is very dry and hot, taking care, however, not to weaken the stems by such means. After they are done flowering, and as soon as the leaves are withered, and having beside me a bason full of water, I transfer the roots immediately from the earth to the bason, and then pick the withered stems, leaves, and rootlets from the roots, and having thoroughly washed them with repeated effusions of cold water, I dry them in the shade, and then hang them up in paper bags in the kitchen or other dry place till the planting season returns. By washing the roots clean all eggs of insects are carried away, which would, undoubtedly, whenever the sun poured forth his strength, have become living animals, and committed great ra-

vages on the roots, in many instances annihilating them altogether. Some growers, to obviate this, recommend that potatoes should be planted between the rows, so that they insects may attach themselves to that plant, but it must certainly be more preferable to remove them altogether which is most easily effected by washing their eggs from the roots. It has also been recommended to allow the roots gradually to dry with the earth about them, this they say preserves the eye of the root safe for the succeeding year; this is certainly the easiest method of all others for destroying the roots, because after they have become shrivelled the clay gradually crumbles from them, leaving the eye supported only by so many dry brittle fibres; but washed when newly taken up, the fibres, on drying, cling together and support each other from injury, and although when the season for planting returns, the roots appear very diminutive, still when we look two days after they are planted they are as much swollen as when they were taken up. I always spread the roots while washing them, although by this system the trouble attendant on the culture is a little increased, yet the certainty of a good blow (for I scarcely ever planted a root that it does not blow, more than compensates for all the trouble.

T. B. W. G.

ARTICLE. III.

A FEW OBSERVATIONS UPON SOME OF THE RECENTLY INTRODUCED ANNUALS.

BY META.

THE investigations that have been carried on, during the last few years, in different parts of the globe have added so many new names to our list of annuals, that a selection from them becomes almost puzzling, and a few remarks upon some of the species worthy of cultivation may not be uninteresting to the readers of the Floricultural Cabinet. Those chiefly are noticed that have been figured in the preceding volumes, all of which may be grown successfully, and though to many of your readers, I am aware the remarks will present nothing new, I trust they may offer something useful, especially as a correspondent in the Number for April, has requested information on the subject.

One of the very prettiest additions to our Flower-borders is

the *Gilia tricolor*, well figured in vol. 2., November; this is a hardy annual, and by sowing it two or three times during the year, it becomes almost a perennial bloomer, for it seeds freely, and they spring up where the plant was previously grown, sustaining the cold of a moderate winter, and flowering early in the spring; it requires to be kept in a compact clump to look well; the seeds should be sown very thin, as the plants flourish better than when transplanted singly; height about a foot and a half

Leptosiphon androsace, figured vol 2. December: a dwarf annual, well adapted for being sown in a small bed by itself; the plant is at first very slender and delicate, but when it becomes established it sets out many side branches, and at the end of each, bears a head of flowers variously tinted in shades of lilac, it therefore does not require to be sown thickly, and is, perhaps, better for being transplanted; height not quite one foot.

Nemophila insignis, figured in vol. 2., December; a very elegant plant with bright blue flowers, and light delicate foliage. Though its name might lead us to imagine it to be "a lover of the shade," it delights in a dry sunny situation; it grows about a foot and a half high, its stems are brittle, and unless well secured to sticks; it is soon injured by the wind, but forms a pretty clump if merely suffered to run upon the surface of the soil. Perhaps it is most valuable as an ornament for the greenhouse in spring: two or three plants in each pot tied usually to a slender stick, look extremely well there, expanding its beautiful blossoms without danger from wind or rain, and continuing in bloom for some time

Ipomopsis elegans, figured in vol. 2., February, under the name *Gilia aggregata*, is not yet become a common plant. It is a biennial, sometimes flowering the first year, sometimes requiring a winter's protection before it throws up its flowering stem, which will rise to more than four feet in height, and is, when in bloom, extremely beautiful. When young the *Ipomopsis* is subject to the attacks of the red spider, and then becomes a dangerous inmate of the greenhouse. Though "*Gilia aggregata*," is given as synonym of *Ipomopsis elegans*, it does not seem to be the same plant, with many seedsmen; seeds sown under the former names both last season and this, having produced very different plants from what was wished.

Calandrinia speciosa, a very pretty plant for growing in a mass

or covering the surface of a small bed ; the leaves are succulent, and of a pretty green, and delights in a dry sunny situation. It is a more desirable species than *Calendrinia grandiflora*, figured vol. 2. February, which proves a straggling plant, flowering sparingly in proportion to its foliage, and its blossoms rarely opening more than one at a time on each stem.

Nolana antriplicifolia, figured vol 4., October, may be ranked as a companion to the *Calendrinia speciosa* ; it grows rapidly and luxuriantly in strong soil, sending out its stems in all directions, and soon covering a considerable space. The leaves are succulent, the flowers light blue, rather resembling the *Convolvulus minor*, and like that flower, they close early. The seeds are produced abundantly, so that though they are only introduced into general cultivation about two seasons back, it may soon become a common plant.

Collinsia bicolor, figured vol 3, April. This is a very pretty hardy annual, growing about a foot and an half high, and flowering both abundantly and for a considerable length of time ; two or three plants of it in a pot, are useful for introducing amongst others, in a basket of moss, or ornamental vase upon a lawn : it produces a great quantity of seed, and self sown plants survived the winter of 1836 at Finchinbroke, Huntingdonshire, and flowered most luxuriantly early in the summer of 1837. As it throws out social flower stems, it should be sown very thinly. When grown in a greenhouse, the stems shoot up at first very rapidly and weakly, and require careful tying.

Eutoca viscida, figured vol 4., February. This is a dwarf annual, the foliage rather coarse in appearance, but the flowers which are produced in a cluster at the end of the stem are of a brilliant light blue, and when examined beneath a microscope, their structure is very beautiful. It should be sown in a tolerably large patch to look well, and rather thickly ; height scarcely one foot.

Escholtzia crocea, figured vol. 2., July. A very showy plant, which though when first introduced was considered an annual will flourish two or three successive seasons, and as it sheds a great quantity of seed, it spreads over a border. The roots being like those of a carrot, and growing deep, does not bear transplanting very well, but the seeds should be sown sparingly where they are intended to remain. The colour is rather too glaring to

form a bed of this plant alone, but it looks very well amongst other plants.

Delphinium sinense. This though but a new biennial, is well worth cultivation, its flowers are deep and a most brilliant blue, it has little foliage, but two or three plants of it placed together form a nice clump, and contrast well in a bed with other flowers. Its height is about two feet, it will bloom the first and second years well, but though the plant will continue longer, the flowers are apt to diminish both in number and depth of hue. It grows from seed readily, and will bear transplanting well.

So many excellent directions were given in the first volume of the Floricultural Cabinet, that little need be added here upon the sowing and management of annuals; a succession may be obtained by sowing a few of each kind in a hot bed early in March pricking them into pots, as they obtain sufficient size, and then turning out the ball of soil entire into the borders early in May; sowing once in the open borders in the beginning or middle of April, as situation or season may warrant, and then again the last week in May, or beginning of June.

Many of the half hardy perennials lately introduced, produce seed so freely, as to be treated as annuals, suffered to perish at the end of the season; amongst these the beautiful *Petunia violacea*, deserves the first place. A bed of this plant forms a most elegant ornament to a garden, self-sown plants spring up, when it has bloomed the previous summer, which, when transplanted to different parts of the garden, forms strong bushy plants, covered with flowers during the autumn. The *Petunia nyctaginiflora* will also spring up occasionally in the borders, and the flowers of these seedlings, are much finer than from cuttings of the same season.

META.

ARTICLE IV.

A REPLY TO OBSERVATIONS "ON RAISING TULIPS FROM SEED,"

BY MR. JOHN SLATER, LOWER BROUGHTON, NEAR MANCHESTER.

SOME observations have been addressed to me upon the article on raising Tulips from seed inserted in your April Number of the Cabinet, I very reluctantly reply to them, neither should I

have done so, had my assertions not been disputed. If the writer had tried the experiment of growing his breeders at a distance from home, as directed, or had procured soil of a different nature, even five or six miles distant, he would not have ventured to make the assertions. What I advanced in that article is from experience as well as personal observations made during some years. I will, however, state facts, which are stubborn things. In the year 1834, I planted sixteen named breeders, which came upwards of sixty miles from this place, six of which broke; 1835, twenty-two breeders, three broke and thirteen did not bloom; 1836, one hundred and seventy breeders, part named and part seedlings, twenty-two of which broke, and eighty-six did not bloom; 1837, upwards of seven hundred, as yet I cannot state how many are broke, but I perceive, from the mottled appearance of the foliage, I shall have a round number. I have also a number which were taken up in bloom, a number planted in old mortar and maiden soil, and some in my regular breeder compost. I will state the result as soon as it can be done accurately.

With respect to the observations on planting Tulip seed edgewise, I shall only say that this year I have plainly proved the superiority of the plan over the old system of sowing. I trust I have satisfactorily answered the observations, and would, in conclusion, advise the writer to be more careful for the future in contradicting others without being able to prove them wrong.

ARTICLE V.

ON THE RELATIVE MERITS OF IRON AND WOOD ROOFS.

FOR STOVES, GREENHOUSES, &c

(CONTINUED FROM PAGE 72)

HAVING then explained my objections to pipes of too large or too small diameter, I shall in concluding these observations offer a few suggestions relative to the formation of the furnace and the apparatus generally; is a guide to persons who may not have had quite so much practical experience as myself, and among the first that I shall draw the Gardener's attention too, with all hot water apparatuses, for his own convenience and for the benefit of his employer, is, to see that the Mechanist or Apparatus fixer supplies a proper furnace door, which should not be less than one

foot square, for the convenience of cleaning-out, lighting and making up of the fire the last thing at night ; for it is impossible for any man to manage a fire properly with a furnace door such as are used to some hot water apparatuses that do not exceed six or eight inches square ; but if a good sized furnace door is used, the gardener is enabled in counties, where coals are dear and wood is cheap, to burn logs of wood or the refuse from the pruning of trees, where he only wants a little fire through the day ; but of course it must be understood that this description of fuel is not to be depended on in severe weather, nor for the making up fires for the night. Whatever description of fuel is used, however, I have always found it a great saving to gentlemen to have a moderately large furnace door, great attention being paid to its formation, in order to prevent the passage of air through the door between the boiler and the fire, the neglect of which causes a great waste of caloric or heat, as air will not support combustion until its temperature is raised to 800 or 900 degrees of Fahrenheit, therefore a current of cold air admitted between the boiler and fire through the door, has a tendency to counteract the power of the fire ; to obviate which double doors should invariably be used, and then if the boiler is so constructed and set as to expose (which is the great secret in the formation of all boilers) a large surface to the action of the fire by means of the construction of the flues round it in such a way as entirely to consume the whole of the caloric or heat before it escapes into the chimney, the greater will be the saving of fuel, and the more powerful and effective the operations of the apparatus altogether. Indeed I have no hesitation in saying if a proper quantity of pipe is used so as to give a sufficient quantity of surface for the command of temperature required in all extremes of weather ; and the furnace, boiler, and flues, being so constructed as suggested, the fire might be made up and left without the least risk for six or eight hours on the severest nights. In the formation of the Egg Shaped Boiler my attention was particularly devoted to the construction of a furnace that would obviate the evils complained of in most hot water apparatuses. I mean the great consumption of fuel and the almost constant attention required, all of which arises from badly constructed fire places and boilers ; but, then on several other circumstances connected with hot water apparatuses which I think highly necessary to be attended to, particularly where the boilers are formed of series of pipes, varying from half

an inch to two inches in diameter, for in the first place on no account should dirty water be used, as it causes a settlement or accumulation of mud, which in time not only injures the boiler, but lessens its power, by not only preventing the fire from acting immediately on the water, but also because the accumulated deposit impedes the circulation of the fluid by diminishing the calibre of the water way, and ultimately forms a hard incrustation similar to what is seen on the bottom of steam boilers, and it frequently ends by burning a hole in the bottom or other parts of the boiler.

Some times in order to save a little trouble, where hard water is more conveniently obtained than soft or rain water, the boiler is filled with hard water which is as injurious as mud, for in the decomposition of the water, consequent on the process of boiling, earthy particles are deposited at the bottom, but if rain water is used, all this injury is prevented: as, I have on several occasions examined boilers that had been taken down after being in use for ten or more years, and where this important part had been properly attended to, there has scarcely been an appearance of incrustation. Moreover, in all plans of boilers, there should be a small cock so placed as to draw the whole of the water off occasionally, for the purpose of cleaning the boiler, &c., as it is well known that water when heated, not only evolves or gives out its component gases, but by mechanical deposition any matter, held in solution in the water, falls to the bottom, and this causes a sediment on the boiler, but by the use of rain or if convenient, filtered water, all this difficulty is overcome.

There is also another difficulty attending hot water, which if properly attended to in the first place, would not be such a perpetual source of inconvenience, namely, when water has to descend under door ways, &c., or to dip below the bottom of the boiler; I have frequently known in small plans of hot water which are admitted to be good in themselves, prove of no service in the cases described; nay, it has even been found necessary to remove them in consequence of the water not circulating under the paths, and other situations when it was necessary to descend and rise again, all this might have been avoided by giving the flow pipes a proper ascension when leaving the boiler, and by placing the reservoir, or cistern sufficiently high so as to counteract the power of the water in the return pipes: I was sent for last spring to remove an apparatus in a lady's greenhouse at Westerham, in

Kent, which could never be brought to act under the door, and succeeded very much to her satisfaction in causing the water to descend in both flow and return pipes, to more than two feet below the level of the bottom of the boiler, after which it had to rise again to above the level of the top of the boiler. The lady's name I have permission and authority to communicate to any person wishing to inspect the apparatus and being so perfectly satisfied with the working now, she has kindly consented to answer any enquiry. In concluding these few practical instructions or observations on the relative properties of common flues, steam and hot water; I shall merely state, that, during my practice I have always considered hot water a much more congenial heat to plants and all other organized bodies whether belonging to the vegetable or animal kingdom from their close analogy, and the circumstance of its containing less of the noxious gases which not only escape from the surface of the flue, but from all the fissures however the flues may be built, for it is impossible to confine this light and subtle fluid. Moreover, as the temperature of hot water pipes is more equal than a flue at both extremities, and rarely exceeds two-hundred degrees of heat, there is not that exhaustion of the aqueous or humid gases which is so essentially necessary to the very existence, much more to the health and fruitfulness of all plants, whether natives of torid or frigid climates, as nothing can tend more to the injury of plants and to the generating of insects than an acid atmosphere highly charged with unwholesome and extraneous gases, and as strong fires applied for heating hot houses with common flues, dries up all humidity and decomposes those nutritious gasses with which the atmosphere is charged, and which are so beneficial to the growth, the health, and the cleanliness of every description of plant, it is only first to infer that a flue which is continually destroying, by its intensity of dry heat, the very vitals of all plants, namely, the humidity of the air in which they are growing, besides evolving the disagreeable smell so common to flues when hot, which arises from the decomposition of the animal and vegetable particles continually floating in the air, it cannot be so congenial to the vegetable kingdom as a mild, gentle, and regular heat, such as is produced by hot water, which fluid is free from all noxious gases given out from the smoke, soot, lime, and bricks of a common hot house flue.

ARTICLE VI.

ON FLORISTS' CONVERSAZIONI.

BY MR. JOHN SLATER, ALBION PLACE, LOWER BROUGHTON, NEAR MANCHESTER.

THE science of Floriculture has for some years been rapidly progressing through the instrumentality of Floral and Horticultural Exhibitions, but something more is requisite, and I would recommend the formation of district Floral Conversazioni. The artists have their Conversazione, and why not the florists? Much good would arise from these social meetings, and that selfishness inherent in man would be in some measure banished from his bosom. The florists have long felt the want of meetings, where matters relating to Floriculture might be properly discussed, the bustle of an exhibition day affords but little time for such a purpose, as all are actively engaged on such an occasion. I have directed the attention of a few individuals to this subject, and a society of this description is now forming in this district. A number of respectable names ought to be obtained in the first instance as subscribers, that an opportunity might be afforded to reject all such as have not acted honorably in their transactions. This would have a great tendency to prevent those complaints which have been too often made by parties of having been duped and cheated with wrong plants and bulbs.

A library consisting of works upon Floriculture and Horticulture ought also to be attached, to afford the members the fullest information upon these subjects. Donations of books and money would be necessary to carry out this plan, and no doubt the wealthier florists would come forward handsomely to assist in providing them. The subscription must be in proportion to the number of subscribers, taking into account the general circumstances of the parties. This fund should be applied to the purchasing of all magazines and works, connected with the objects of the society. The members should be allowed to take home to read any volume or number of a periodical for a certain number of days. The meeting to take place once a month, when a given subject shall be discussed, and the President to name the subject proposed to be discussed the following monthly meeting. No doubt advantage would be taken of the season, to bring under notice those flowers, &c. then in perfection, and by this means much valuable information might be obtained. Having thus given

a brief outline, some of your readers, who, may wish to establish a society of this description, I doubt not will be enabled to fill it up.

ARTICLE VII.

ON RAISING RANUNCULUSS' FROM SEED,

BY H. G. S.

SHOULD you think the following worthy a place in your Florist's Magazine, I should feel obliged by your inserting it in an early number.

Ranunculus Seed is to be procured from semi-double flowers ; care should therefore be taken to save it from such as are possessed of good properties, viz, such as have full strong stems, a considerable number of large well-formed petals, and rich good colours, chiefly preferring the darker, but not to the exclusion of the lighter coloured when their properties answer the foregoing description. The seed should remain on the plant till it has lost its verdure, and becomes brown and dry, it may then be cut off, and be spread upon paper, in a dry room, exposed to the sun, that every degree of humidity may be exhaled from it, in which state it should be put into a bag, and preserved in a dry warm room till the time of sowing, otherwise it will be in danger of contracting a dampness, which will soon produce a mouldness, that will infallibly destroy it. January is the proper time to sow the seed, and in order to prepare it, it must be separated from the stalks to which it is connected, in the following manner, viz : in the first place it should be taken out of the bag and spread thin upon paper, tea tray, &c. and placed before a moderate fire, till it is just warm, and no more ; the seed will then easily scrape off, by means of a penknife, but great care must be taken to avoid scraping it off in lumps, or suffering any pieces of the stalk, dried petals of the flower, or other extraneous matter to be mixed with it, which would create a mouldness when sown, of very destructive consequence ; when the seed is scraped in a proper manner it will have the appearance of clean coarse bran, with a little brown or purple speck in the centre of each cuticle, which is the kernel.

When the seed is thus prepared, it should be sown on a shallow frame provided with glasses, similar to those made use of for

cucumbers and melons; the soil should have been previously taken out, three feet deep, and spread thin upon the ground till it has been perfectly frozen throughout, in order to destroy any vermin it may have contained. When the pit is filled up again with the frozen lumps of earth, it should remain till the whole mass has thawed, and subsided to its pristine bulk, or nearly so; its surface should then be made perfectly smooth and even, and the seed sown upon it with the utmost regularity, in such a quantity as nearly to cover it; the glasses should be placed over it immediately, and the frame kept closely covered with them, for two or three days, till the seed begins to swell and soften; a little light earth should then be sifted upon, through a fine sieve, but not sufficient to cover it, this should be repeated once or twice a week, till the greater part of the seed disappears: it is proper to remark that such seeds as happen to be covered deeper than the thickness of a half-crown piece, will never vegetate, and must, of course, inevitably perish. It is necessary that the seed be kept moderately moist by gentle watering with soft water that has been exposed to the sun, but too much moisture is nevertheless injurious.

About the time that the plants begin to appear, it is requisite to stir the surface of the earth with a pin, just sufficiently to admit air, and give liberty to the young plants to pass easily through; this operation should be very carefully performed to prevent breaking off the fibres, or raising and leaving any of the plants out of the earth, because one hour's sun upon such would certainly destroy them.

After the plants are all up, and their two interior leaves appear, more air must be given, by having hurdles or lattice work, substituted for the glasses; waterings must be regularly continued in the manner before described, when the long continuance of dry weather renders it necessary; but fine warm showers of rain are always preferable when they happen in due time.

This kind of management is to be continued till the roots are matured, and fit to take up, which is known by the foliage becoming brown, dry, and nearly consumed. The roots are to be dried and preserved in the usual way, and to be planted the same time as large ones in the autumn, the greater part, or such as have two or more claws, will blow in tolerable perfection the following summer.

ARTICLE VII.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

(Continued from page 96.)

THE furze bush also is one of the greatest enliveners of the shrubbery at this season, particularly when it is allowed to exhibit its golden blossoms at the foot of some dark foliaged evergreen. Among the trees of the back ground, the wych elm, the alder, the willow, and the ozier, flower in March, at the same period, the leafless branches of the almond are covered with blushing petals; whilst the sloe and plum are most conspicuously beautiful with snowy blossoms, which are enhanced by contrast, if made to rise from the midst of dwarf evergreens, and shaded by others of taller growth. In a later season, the fruit is no less acceptable, and scarcely less ornamental.

In the early months, also, the mezereon, the dwarf almond, and the pyrus japonica, give, life to the foreground, when planted in little groups of three or four of each together.

At this season of the year too, much of the beauty of the shrubbery depends on covering the banks, and feet of trees and shrubs with considerable patches of the earliest flowers.

In February the snowdrop has for its cotemporary the crocns, which is also very ornamental, when planted in such quantity as to cover a large space. When scattered singly, or arranged in formal bodies, its effect is entirely lost; and like a single candle, in a cathedral, it seems but to cast an additional gloom over the scene. The banks should, therefore, be made to glow with the flaming petals of the yellow crocus, whilst other spots should shine with the silvery tints of the purple variety. Clumps of the winter hellebore, or aconite, should also be formed on a large scale, as their yellow cups, set, as it were, in green saucers, have a fine effect in February. The anemone hepatica is also as beautiful as hardy; and as there are varieties with red, blue, and white flowers, it is a plant that should be cultivated to a greater extent than is usual, as an embellishment to this season. The wild wood anemone, whose white and yellow flowers so enliven the earth at the same time, may be planted under the trees; and the primrose, that so sweetly "peeps beneath the thorn," when sprinkled abundantly between the shrubs and trees, gives an additional plea-

sure to the eye. The story of Prosperine may be recalled to our minds, by the view of gay plantations of early daffodils, that shake their golden heads to the winds of February and March.

Let us not forget the common field daisy, large patches of which are very ornamental, when planted amongst shrubs; and the double crimson white, and variegated kinds, deserve a conspicuous situation for their beauty, as well as for their early flowering.

As the lawn forms a principal feature in every pleasure-ground, this should also have an undulating surface, where the extent of ground will admit of it: and it must be a small space indeed that will not allow of a bank being thrown up. The form of this part should neither be too regular, nor of a studied irregularity. It should appear in different places to retire into the plantation, so as to give the idea of greater extent, especially when viewed from the windows of the villa.

Where the coach road is carried through the lawn, (which however, if possible, should be avoided) it should be occasionally obscured by irregular clumps of shrubs, such as roses mixt with dwarf evergreens. The private walks must also be of breadth sufficient to admit three persons abreast, however small the grounds may be; for plants are sure to be injured where the walks are narrow. In extensive shrubberies, each walk should lead to some particular object: to the orchard, kitchen garden, botanical borders, greenhouse, dairy, ice-house, mushroom-hut, aviary, poultry yard, and stables. The intention of the plantation should seem to be, to conduct the walker in the most agreeable manner to each outlet and building of utility or pleasure.

Where a lawn is of sufficient extent for detached trees, the apple may be admitted with great effect, the blossom being amongst the most beautiful that open in spring. Such as produce a red fruit in autumn are more ornamental than most other trees.

To those who are so devoted to fashion, as not to venture to treat their lungs with air, unmixed with smoke, till the crowds that swarmed at court have fixed their departure for rural scenes and a pure atmosphere, like swallows and other birds of passage; to such, the gaiety of the autumnal shrubbery is of most importance. It remains to say, how the last expiring ray of beauty may be thrown over the pleasure-ground.

(To be continued.)

R E V I E W .

A Practical Treatise on Warming Buildings by Hot Water ; and an inquiry into the Laws of radiant and conducted Heat. To which are added, Remarks on Ventilation, and on the various methods of distributing artificial Heat, and their effect on animal and vegetable Physiology. By CHARLES HOOD, F. R. A. S. Illustrated by numerous Wood-cuts ; 8vo., p. p. 216. London : Whittaker & Co., Ave Maria Lane, 1837.

This excellent Publication contains a very judicious proposition of practical, and theoretical observations on the matters treated upon, and which are detailed in a very scientific and explicit manner. Every person who is at all interested in heating Dwellings, Hot-houses, Greenhouses, &c., ought to possess the Book, which cannot fail to prove extremely useful. We very strongly recommend the Work to our readers. The author observes in the preface that

“ Frequent applications having been made to me, by persons who were aware that the subject had engaged my attention, to recommend to them a practical treatise on its principles and application, the utility of such a work in forwarding the progress of the discovery, became obvious. And finding that nothing relating to the invention had hitherto been published, except a few scattered and unimportant notices, it appeared probable that the materials I possessed might form a treatise which would be useful, not only in showing the practical application of the invention, but also in explaining the scientific principles upon which the various effects depend. The following pages are therefore offered, in the hope of supplying the desideratum.

“ The different parts of the subject have been arranged, as far as possible, under distinct heads. The primary object has been to explain the principles, in a manner perfectly clear and intelligible to such as are unacquainted with those branches of physical science on which the philosophy of the invention is based : and, while endeavouring to remove the erroneous notion, which is entertained by some persons, that a certain degree of danger is inseparable from the plan, to show that danger can occur only through a misapplication of the principles.

“ In order to pursue the inquiry in a popular manner, all abstruse calculations and scientific technicalities have been, as much as possible, avoided ; and the most simple definitions the subject would admit of, have been adopted, as far as is consistent with perspicuity.

“ The Rules, Calculations, and Tables, which are given in the body of the work, have, nearly all, been constructed expressly with reference to the present inquiry ; and the tables given at the end of the volume are compiled from the best authorities : the whole comprising, it is hoped, all the information which the subject requires.

The Contents are

CHAPTER I.—On the cause of the circulation of the water, and its consequences.—Chapter II. On the application of the principles.—Chapter III. On the proportionate sizes of various parts of the apparatus.—Chapter IV. On permanence of temperature, depending on the form and size of the boiler and pipes.—Chapter V. On the size and construction of furnaces.—Chapter VI. On the laws of heat.—Chapter VII. Experiments on cooling.—Chapter

VIII. On the application of the laws of heat, to determine the proper size of an apparatus for heating any description of building.—Chapter IX. On peculiar modifications of the hot-water apparatus.—Chapter X. General application and summary.—Chapter XI. On ventilation.—Chapter XII. On the various methods used for distributing artificial heat.—Tables, &c.

To show the nature of the work we extract the following.

“In making an estimate of the quantity of glass contained in any particular building, the extent of surface of the wood work must be carefully excluded from the calculation. This is particularly necessary in buildings used for horticultural purposes, where from the smallness of the panes, the wood-work occupies a considerable space. The readiest way of calculating, and sufficiently accurate for ordinary purposes, is to take the square surface of the sashes, and then deduct one-eighth of the amount for the wood-work. In the generality of horticultural buildings, the wood-work fully amounts to this quantity: but in some expensively finished conservatories, &c., it is considerably less, and therefore the allowance must be made accordingly. When the frames and sashes are made of metal, the radiation of heat will be quite as much from the frame as from the glass; therefore, in such cases, no deduction must be made.

“Some loss of heat will likewise arise from imperfect fitting of doors and windows. In these cases the circumstances vary very considerably; but in the majority of instances, no allowance is necessary for these sources of loss of heat, the external temperature of the air having been reckoned sufficiently low to supersede the necessity of any farther deduction.

“From the preceding calculations, the following corollary may be drawn:—the quantity of air to be warmed per minute, in habitable rooms and public buildings, must be $3\frac{1}{2}$ cubic feet for each person the room contains, and $1\frac{1}{2}$ cubic feet for each square foot of glass; and for conservatories, forcing houses, and other buildings of this description, the quantity of air to be warmed per minute, must be $1\frac{1}{2}$ cubic feet for each square foot of glass which the building contains. When the quantity of air required to be heated, has been thus ascertained, the length of pipe which will be necessary, may be found by the following

“**RULE:**—Multiply 125 by the difference between the temperature at which the room is purposed to be kept, when at its maximum, and the temperature of the external air; and divide this product by the difference between the temperature of the pipes, and the proposed temperature of the room: then, the quotient thus obtained, when multiplied by the number of cubic feet of air to be warmed per minute, and this product divided by 222, will give the number of feet in length, of pipe 4 inches diameter, which will produce the desired effect.”

(To be Continued.)

The Fruit, Flower, and Kitchen Garden, being the article, “**HORTICULTURE**,” of the seventh edition of the *Encyclopædia Britannica*. By PATRICK NEILL, L. L. D., F. R. S. E. Secretary to the Caledonian Horticultural Society. Edinburgh: Adam & Charles Black, North Bridge, Booksellers to Her Majesty for Scotland; 12mo. p. p. 336.

This work reached us so late in the month, that we can only notice its publication, for the present, we will remark further in our next. We would just observe, however, that the work issuing from so eminent an Horticulturist as the author, is a sufficient recommendation of it to every person fond of gardening.

PART III.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. AMPHICOME ARGUTA, *Finely-cut leaved.* [Bot. Reg. 19,

BIGONIACEÆ, DIDYNAMIA ANGIOSPERMIA.

This very handsome flowering herbaceous perennial plant, was discovered on the Himalaya Mountains, at an elevation of six or eight thousand feet. Seeds of it were sent to the London Horticultural Society, in whose garden a plant bloomed last August. It grows about a foot high, of a neat appearance, producing its beautiful blossoms abundantly, in a terminal raceme; each flower is near two inches long, funnel-shaped, the mouth divided into five sections, and of pretty rose colour, with a few streaks of white, and the bottom part of the tube is yellow. It blooms from June to the end of summer. It is a very desirable plant for the flower garden; it is found to require a dry situation, or will be very liable to perish in winter, it would be best to protect it in winter by a hand glass, or something of that kind. The plant can be propagated either by seeds or cuttings. Amphiscome, from *amphi*, around; and *kome*, hair; alluding to the structure of the seeds.

2. CYMBIDIUM TRISTE, *Lurid flowered.* [Bot. Mag. 3648.

ORCHIDACEÆ. GYNANDRIA MONANDRIA. SYNONYM, EPIDENDRUM TRISTE.

A native of Nepal, Ceylon, and Japan. It has bloomed in the collection of Orchidæe belonging to John Horsfield, Esq., Everton, near Liverpool. The flowers are produced on a short sessile raceme. The stem rising about eight or ten inches; sepals of a purplish-yellow, lip large, and of a rich deep purple, column mottled with rosy-purple. Each blossom is about an inch and a half across.

3. LOASA LATERITA, *Red flowered.*

LOASACEÆ, POLYADELPHIA POLYANDRIA.

Mr. Tweedie sent seeds of this pretty flowering species from Tucuman. It is a fine climbing kind, producing numerous flowers of an orange red colour. It blooms freely in the open air during summer, and when grown in a greenhouse or conservatory nearly all the year. It is easily raised by seeds or cuttings, and delights in a sandy loam. It is an ornamental plant for a Verandah or trellis in the flower garden.

4. MAMMILLARIA FLORIBUNDA, *Copious flowering.* [Bot. Mag. 3647.

CACTEÆ, ICOSANDRIA MONOGYNIA.

This pretty flowering species was imported from Chili, by Mr. Hitchen, and is now in the rich collection of Messrs. Mackie, Norwich. The flowers are produced at the crown of the plant, most abundantly. They are of a fine rosy pink colour.

5. *MUCUNA PRURIENS*, *West Indian Cow-itch Plant* (Bot Reg. 18.

FABACEÆ, DIADELPHIA DECANDRIA.

In the West Indies the plant grows in the waste lands, fences, river courses, &c. Its long twining stems rapidly takes hold of every thing within its reach, producing its numerous long racemes of fine purple flowers. In the plant stove of F. Perkins, Esq., Shipstead Place, it bloomed in 1836; each raceme of flowers being near a foot long. The hairs upon the plant are so pungent as to pierce the skin, and cause a violent pain, and intolerable itching. *Mucuna*, is its Brazilian name.

6. *PASSIFLORA ONYCHINA*, *Lieut. Sullivan's Passion Flower*.

PASSIFLORACEÆ. MONADELPHIA PENTANDRIA.

A native of Rio de Janeiro, and introduced into this country by B. J. Sullivan, Esq., and was first grown in this country in the fine collection of Sir Charles Lemon, Bart. M. P., Carcleu, Cornwall. It is a very beautiful hot house species, flowering profusely; each flower is about two inches and a half across, of a fine light blue, tinged with rose, and the centre of a carmine red. It deserves a place in every collection.

7. *PENTSTEMON DIFFUSUS*, *Spreading pentstemon*.

SCROPHULARINÆ, DEDYNAMIA ANGIOSPERMIA.

A hardy herbaceous perennial species, growing two or three feet high, and spreading proportionately. The plant was discovered by the late Mr. Douglas, near the mouth of the Columbia River. The flowers are produced in large panicles, of a bright purple colour. Each flower is about an inch long. It is a very pretty species.

NEW OR RARE PLANTS NOTICED

AT MESSRS. LODDIGES'S, HACKNEY NURSERY.

ACACIA VIRGATA. This neat and pretty flowering species we have seen in several collections; very fine plants at Messrs. Loddiges's, Hackney Nursery. The plant is of a much neater habit than *acacia Armata*. The flowers are produced in profusion, of a deep yellow, and very fragrant. It merits a situation in every greenhouse or conservatory. It is sold very cheap.

ACACIA HYBRIDA. This kind appears to be an hybrid, between *A armata* and *A augustifolia*. It is a very neat, erect growing kind, flowering freely, the blossoms are of a beautiful yellow; Messrs. Loddiges's have a good stock of plants, at a low price.

EPACRIS'S. Of this most beautiful flowering genus, we saw the following handsome kinds: viz. *E campanulata alba*, *E campanulata rubra*, *E nivalis*, each of which are very handsome, blooming so profusely, and at the early part of the season, they are most desirable ornaments for the greenhouse or conservatory. Plants may be had cheap.

PACHYPODIUM TUBEROSUM. Messrs. Loddiges's have this beautiful blooming plant. It has the appearance of an *Euphorbia*. The flowers however differ, they much resemble the *Gloxinias*, but are a trifle less. Each flower is somewhat less than *G superba*, of a beautiful flesh colour outside, but of a dark rose within. It would flourish well in a warmish greenhouse.

EUPHORBIA SPLENDENS, var **NOVCE**. The original beautiful flowering species was procured by the Duke of Devonshire. The plant now under consideration appears to be an hybrid. The blossoms are of a pretty rosy crimson, more than half an inch across, and of a lighter colour than the flowers of the original species.

EUPHORBIA JACQUINIFLORA. A very beautiful scarlet flowering species, very ornamental for the plant stove. Both the above are plentiful at Messrs. Loddiges's.

SCOTTIA DENTATA. A neat flowering greenhouse shrub. The flowers are of the pea form, of buff colour, edged with carmine, produced in profusion. The plant is a very neat growing one, having pretty cordate leaves.

BORONIA ALATA. A very handsome growing plant, with striking foliage. The flowers are near half an inch across, of a pale rose colour. It is an ornamental plant for the greenhouse.

HOVEA LONGIFOLIA. A very pretty greenhouse plant, flowering very freely. The blossoms are of a rosy purple colour.

HOVEA NOVCE SPEC. A new species with flesh coloured flowers.

HOVEA ELLIPTICA. This is a very pretty flowering species. The blossoms are very striking. The wings are of a pale blue, whilst the keel is of a dark violet, the contrast being beautiful.

HOVEA PURPUREA. In growth it much resembles the above species, the flowers are of a purple colour.

LILIUM SPECIOSUM, var. **LANCIFOLIUM**. A plant of this fine flowering kind is throwing up a flowering stem. There are two other new kinds which appear likely to bloom during summer, viz. **L. ROSEUM**, and **L. LANCIFOLIUM PUNCTATUM**. These new Lilies are highly ornamental plants for the greenhouse.

DENDROBIUM NOBILE. This splendid flowering stove Orchideous plant has been profusely in bloom, the blossoms far exceed in beauty any other species. In fact, no other stove orchideæ that we have seen is equal to it in beauty. Each flower is about three inches across. The white being pure, and some portions of the flower of a rosy carmine. The inner part of the labellum is of a deep violet crimson, producing a most striking effect. The plant deserves a place in every collection.

ACACIA VIRGATA. A very neat growing greenhouse species, producing a profusion of deep yellow blossoms, which are very fragrant. It deserves a place in every collection; blooming so early and freely, in addition to being sweet, alike recommend it.

DIASMA CAPITATA. A beautiful greenhouse plant, forming a neat bush, and blooming most profusely. The flowers are of a bluish purple. It is as hardy as a Myrtle.

CAMELLIAS. The show was most brilliant, and some of the kinds are grown to large bushes, ten or twelve feet high, and literally loaded with flowers. To walk amongst them is like going through a forest of Camellias. It would amply repay a visit to view them. We shall remark on various kinds in our next.

AT Mr. LOWES, Clapton Nursery.—**RUPELLIA AZUREA**. A new and handsome species, with flowers of a fine blue.

GARDOQUIA MULTIFLORA. A new and handsome species, the flowers are of a fine rosy scarlet, and produced very abundantly. It will be very ornamental for the greenhouse.

GLEVILLIA ROBUSTA. A greenhouse plant with very beautiful foliage. It was not in bloom.

PART II.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON GLYCINE HARRISONIA.—M. E. L. will thank Mr. Harrison to inform her, through the Floricultural Cabinet, when, where, and at what price, plants of the *Glycine Harrisonia* may be procured; likewise how they could be forwarded, and if any particular care is requisite in their management.

[The plant can be supplied by us from Downham Nursery, 7s. 6d. each.

It is of the easiest culture, vigorous in growth, and a profuse bloomer.

—CONDUCTOR.]

ON A COMPOST FOR THE AURICULA.—Having long admired the candour and intelligence of your "Cabinet," and the facility it gives to inquiry, and clearing up of doubts on floricultural subjects; I take the liberty of availing myself of this latter characteristic in the present instance.

In a compost I am forming for Auriculas, I have saturated layer after layer with the urine of horses, and then keeping it under cover, the fluid parts evaporate, leaving urea, phosphure of lime, and other salts contained in the urine, intermixed with the compost. Do you not think this will greatly increase the fertilizing properties of the soil? Is not inspissated urine or urine evaporated until it becomes glutinous, a remarkably active manure? The pondrette of the French contains a considerable ratio of this; do you think it likely to injure my plants, after it has been thoroughly incorporated with the soil? By inserting these queries as early as possible, and some correspondent favouring me with an answer will greatly oblige a

CONSTANT READER.

ANSWERS.

ON THE FUCHSIA.—Reply to an Amateur, resident at Camberwell.—I beg to state that I have cultivated that beautiful and graceful plant, the *Fuchsia*, mentioned in his query, for above three years, and have now a plant not more than two years old, 5 feet in height, and as many in circumference. My opinion is, that putting the plants in-doors of an evening, is the cause of the buds dropping off, as I always leave mine out night and day, as soon as the frosts are over; in the next place, it is probably for want of water, when coming into bloom, they should be plentifully supplied, at least twice in four and twenty hours: and a pan always kept under them. I have no doubt, if your correspondent will adopt this plan, he will find himself rewarded, by a splendid show of these delightful flowers.

Bayswater.

W. M.

ON THE WISTERIA SINENSIS.—In answer to the query of "A Subscriber, contained in the last number of the Floricultural Cabinet, I may, perhaps, be able to give him some little information on the flowering of the *Wisteria Sinensis*, which at first disappointed me as it appears to have done the Enquirer. When I obtained my plant six years ago, having seen it in bloom in the South of England, I imagined the shelter of the greenhouse might be necessary for its flowering and accordingly placed it there, where it soon covered the whole of the back with its luxuriant foliage, but never showed one flower. The following spring it was placed in a full South aspect against the garden wall in the open air, but still failed to flower; when by the advice of a person who had seen the plant elsewhere, I had it dressed

and cut in the same manner as a vine, leaving only one or two eyes of the new wood. The first season it flowered very sparingly, but last spring, at this time, it was covered with a profusion of blossoms, even before the leaves were fully expanded; and it flowered a second time in the autumn. The present unusually cold season appears to have retarded it, but it gives promise of many flowers. It is merely planted in common garden loam, and suffered to remain unprotected during the winter, but as soon as it shows signs of returning vegetation, a wollen net is placed over it every evening to guard it during the frequent night frosts, and is not removed until the sun has some power in the morning.

H. F.

FLORICULTURAL CALENDAR FOR MAY.

PLANT STOVE.—Very little fire-heat will now be required, only applying it in cold weather. The plants will progressively require an increase of air and water. If any want an increase of pot-room, it should be attended to as early as possible; otherwise, if not watered frequently, the foliage or flowers will be liable to suffer, turn brown, or fall off the plant. Keep the plants free from decayed leaves, moss, &c. Frequently stir the surface of the soil. When any casual irregularities in form occur, prune or tie the shoots as required. It is a good time for propagating by cuttings, suckers, seeds, &c. placing them in moist heat.

TENDER OR STOVE ANNUALS.—When it is desired to have some plants to bloom late in autumn, as Balsams, Cockscombs, Browallia, &c., seeds should now be sown, and the plants potted off into small sized pots, as soon as they are large enough, using a rich soil.

GREENHOUSE.—During the early part of May, a few frosty nights generally occur; in consequence of which, it is advisable not to take out the general stock of plants before the middle of the month, or even in cold situations, before the 25th. Whilst the plants, however, remain in the greenhouse, let them have all the air that can be given, during the day, and at nights if no appearance of frost. Particular attention will now be required to afford an ample supply of water to free-growing kinds of plants. Frequently syringe them over the tops at evening, just before sun set. If any of the plants be attacked with green fly, or any other similar insects, apply a sprinkling of tobacco water, diluted with water, by adding to one quart of the liquid five of water; in applying which to the plants, syringe them at the under as well as upper surface of the leaves: a repetition will rarely be required. This mode of destroying the insects is far preferable to fumigation, no injury being sustained by it, even if applied in a pure state. The liquid can be obtained of tobacconists at 10d. or 1s. per gallon. Inarching Orange or Lemon trees may still be performed. It is a good time for increasing plants by cuttings, striking in moist heat. Greenhouse annuals—as *Salpiglossis*, *Globe Amaranthus*, *Balsams*, &c.—should be encouraged by a little warmth, and shifted into larger pots, early in the month; so that the plants may make a show, to succeed the removal of the general collection of greenhouse plants. Cuttings or suckers of *Chrysanthemums* should now be taken off, if not done before. *Triverania coccinea* plants should be potted singly into a light rich soil and be forwarded in the stove, and repotted as they advance in growth, not too much at a time, but as root room appears necessary. *Lobelias* for the greenhouse should be similarly treated, as to potting, &c.

FLOWER GARDEN.—Continue to protect beds of *Hyacinths*, *Tulips*, &c. *Carnations* in pots should be encouraged by manure water, &c., in order to grow them vigorously: care in striking them will be required. By the middle of the month, half-hardy annuals—as *China Asters*, *Marigolds*, &c.—may be planted out in the open borders. Some of the best kinds may be potted, as done to the more tender sorts. Many kinds of greenhouse plants

—as *Petunias*, *Salpiglossias*, *Salvias*, *Fuchsias*, *Heliotropes*, &c.—should now be planted out in the open border. *Dahlias*, that have been forwarded in pots, frames, &c., may be planted out towards the end of the month. Seedlings may be pricked out, in a warm situation, having a deep, fresh, rich soil. When *Stocks*, *Mignonette*, *China Asters*, &c. are wished to bloom late in the year, seeds may now be sown, either under a frame or on a warm border. Slips of *Double Wallflowers* should now be put in, under a hand-glass. Seeds of biennials—as *Sweet Williams*, *Scabios*, *Campions*, &c.—should now be sown. *Tuberoses*, for late flowering, should now be planted, either in pots or warm borders. Offsets of *Campanula pyramidalis*, should be planted in rich soil, and placed in the greenhouse. Repotting must be continued till they cease to grow, by this means the plants will reach eight feet high, and be very branching.

REFERENCE TO PLATE.

CAMELLIA JAPONICA, var. *MARCHIONESS OF EXETER*. This very superior variety was raised by James Priaula, Esq., Monteville House, Guernsey. The seed was procured from the variety *Middlemints*. The plant combines the vigour of that variety, with the very valuable property of a most profuse bloomer. Mr Priaula, favoured us with a bloom, and having since looked through all the collections in and about London, we have not seen one equal to it. Its beautiful colour, extraordinary size, and its free blooming property, alike unite to render it unrivalled in its class.

TROPEOLUM JARRATTI. The flowers of this handsome species, have a resemblance to *T. tricolorum*, but on examination it will soon be perceived that there is a very great distinction. The flowers of the present species are nearly twice the size, of a much more brilliant colour, and having a small portion of yellow on the outside, the two upper petals are finely streaked with brown. The plant has been introduced into this country by Messrs. Youell, Nurserymen, Yarmouth, having had it sent them from Santiago. The plant has been found to flourish in a very cool Greenhouse, and there flowering most profusely. It is very probable that it will flourish and bloom abundantly during summer, in the open border, as early in spring as the weather will permit. It would certainly be a fine acquisition to every greenhouse, conservatory or flower garden, as it grows very vigorously. Messrs. Youell, we are informed, imported a considerable number of *Tropeolum* bulbs, but only two kinds have yet bloomed, viz., the present species, and *T. crachyceras*, it is expected other beautiful kinds will be found amongst the lot. The specific title was given by Messrs. Youell, in compliment to a distinguished Horticulturist, John Jarrat Esq., Camerton House, near Bath.

TROPEOLUM TUBEROSUM. This very showy species was sent to the Glasgow Botanic Garden, by the late Mr. Drummond, from the Texas. We saw fine plants of it in bloom, grown in the open border during last summer, and autumn, at the Epsom Nursery. We were informed that it does not flourish if kept in a pot, but when pushed on a little in spring, as done with *Dahlias*, and like them be planted out in the open air. The plant grows so vigorously, that with a number of branches stuck in the ground so as to form a bush, we saw plants overspreading the branches, so as to completely hide them, being four or five feet high, and more than that in diameter. The dense mass of foliage, forming a handsome bush. The flowers are produced upon long footstalks, which protrude several inches above the foliage, exhibiting them to view in a striking manner.

The plant is of easy culture, being increased very easily by cuttings, or tubers which are produced freely. The tubers are fit to eat, having the flavour of a superior potatoe, but are watery.

They require to be treated as the *Dahlia*, by taking up the tubers at the end of summer, and preserving them during winter; also in the spring and summer treatment.

THE
FLORICULTURAL CABINET,

JUNE, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

MODE OF OBTAINING DWARF COCKSCOMBS FROM TALL
GROWING VARIETIES.

BY WILLIAM WHEATLEY, FLOWER GARDENER TO JOHN WILLIAM SPICER, ESQ.
ESHER PLACE, SURREY.

EARLY in the month of March the seeds were sown, and placed in a warm frame ; as soon as the plants began to show flower, the best were selected of various shades of colour, and pricked out into large pots, from whom the best again were made choice of, and potted off for flowering, the remainder were left in the pots, until they attained the height of about twelve inches. These by way of experiment, were cut off about two inches under the crests, which were at that time about four inches in length, and potted off into 60's. In the course of a fortnight they were well rooted, and in about a fortnight after they were shifted into 48's; three weeks after this it became necessary to give them another shifting, when they were finally put into 32's. During the above process the pots were plunged in leaf mould up to the rim in a warm frame, where they remained till the end of July. The average length of the crests measured twenty-four inches, and five inches across over the disk, and the height of the plants when fully grown was about five inches above the

pot. The compost they were grown in consisted of one half of good loam and equal parts of leaf mould and rotten dung well mixed up together.

To the experienced Floriculturist the above practice may not be new, but to many readers of the Cabinet, it may claim an interest, and as such I send it for insertion in your widely extended and useful publication.

Esher Place, May, 1838.

W. WHEATLEY.

ARTICLE II.

ON LAYING CARNATIONS.

BY POMONA.

As THE season for laying Carnations is fast approaching, if you think it worth your while to publish in the Cabinet the plan I adopt for that purpose, it is at your service. Laying in many cases are indispensable for the continuation of the sorts, for if a plant sends up but only one stem without any side shoot for laying and be allowed to blow, it will likely die. If this happen to valuable kinds, the flower bud should be nipt off, so as to cause the plant to branch.

It is said by an eminent florist that common gardeners are great bunglers in laying, and that there is not one in ten whose assistance he would accept in a case of emergency, that he would rather trust to an amateur, a cobbler, a weaver, or a barber, who had any sort of practice with their own flowers; but how far this statement is correct I will leave it to others to judge for themselves.

The best time to lay Carnations, is when the plants are in full bloom, which generally happens about the middle or towards the end of July or the beginning of August, according as the season is more or less forward; whenever this mode was adopted I have invariably found that they were more certain of striking than at any other season of the year.

Persons who are particularly desirous of preserving the blooms, in the greatest perfection, defer laying till the flowers decline, the blooms being considerably impaired by the operation, more especially if the weather is dry and at an early period of blooming. The advantages which is derived from early laying is to

obtain plants that are strong and healthy before the cold weather commences; I consider the best time to be from the 20th of July to the 20th of August, when they will have time enough to root strongly before the winter begins.

The pegs which I select for laying is fern, (but others use wood or bone) each five or six inches long, with a short hook at the top. Fern pegs, which in most places are easily procured, are, in my opinion to be preferred, because they are naturally formed for the purpose; they retain a sufficient degree of strength to hold the layers securely down till they have formed root, and will decay when no longer needful.

The day before I begin the operation of laying my plants, I water them freely, taking great care to pick off any part that is decayed, or likely to obstruct their rooting; and when they produce too many side shoots, it will be better to take only two or three layers, if the sort is of value, reserving the rest for pipings, because many layers draw too much nourishment from the root of the plant. Supposing the layer selected to have four or five joints, the lower leaves must all be cut off, or stripped close to the stem, till within two or three joints of the end or extremity of the layer.

The practice which I pursue is to cut off all the leaves with a knife or a pair of scissors, so as to leave them only an inch, or an inch and a half in length, from the joint whence they proceed according to the strength and substance of the layer; but it is questioned by some whether it would not tend to strengthen the new plant about to be formed, were the ends of the leaves left entire.

All the layers on one plant must be thus dressed or prepared before proceeding farther; and when the layers are ready, the bits of leaves must be cleared away from the surface of the soil, which ought to be stirred about an inch in depth, and fresh mould, rich and light, but not too fine in the grain added, to the depth of an inch or two. I find that the old Carnation compost used last year answers very well for this purpose, and ought to be kept for the occasion. I next take a very sharp, smooth-edged pen-knife, with a small thin blade, holding the layer between the thumb and fingers of the left hand a little bent upwards, and introduce the knife on that side of the layer next the ground in a sloping direction upwards, commencing about a quarter of an inch below the second or third joint from the extremity, and con-

tinuing to cut through the middle of that joint, and one half or three quarters of an inch above it. The small portion left under and connected with the joint is to be cut off horizontally, quite close to the bottom of the joint, but not into it, because it is from the outer circle of the bottom of the joint that the fibres proceed, and consequently this part ought to be protected. It is also requisite to cut it off close to the joint, because if suffered to remain, it would decay, and perhaps infect with putridity the joint itself, and kill the plant.

The slip or tongue thus recommended to be made, is for the purpose of interrupting the pulp from flowing downwards, and to enable it to form root fibres, while the sap in the more central parts flowing upwards would not be interrupted, and the layered shoot still continue to grow as if nothing of the kind had happened. If the incision is made with a knife, the layer should be pressed into the soil firmly, and great care must be taken not to break it off or crack it at the joints, for this would interrupt the due supply of sap from the mother plant, and it would also render it liable to canker, and if that should take place the plant must inevitably perish.

A peg must be forced into the ground close behind the joint where the incision was made in the layer, and not more than half an inch below the surface of the soil, for I have always found that the fibres are soonest formed, when the joint from which they proceed, is barely covered with earth. When buried too deep they will be out of the reach of the sun's heat, and of course less liable to root, and in many cases decay all together. The remaining part of the stalk of the layer should lie as much as possible upon or above the surface of the soil, but should not on any account be covered deep with earth, for the heat of the sun, and air, being excluded, would inevitably cause it to decay before the layer could be furnished with sufficient nourishment to cause the process of rooting.

It will be necessary to raise the extreme point of the layer to as upright a position as can conveniently be effected, but it is necessary at first that it should have an exactly erect position, for it will naturally soon acquire this in its progress of growth. It should not be so horizontal as not to allow the cut part to open sufficiently for the fibres to issue out with regularity on every side. The layers when pressed down should be in a dry state, for they are so brittle when full of sap that they are liable

to break off. When, therefore, the layers are dressed and ready to be pegged down, it is requisite the plant should be placed in the sun for a short time, say half an hour, in order that the layers may become flaccid and pliable, I have found this a very beneficial experiment.

I have always found it the best mode of proceeding to give the plants a good watering after the process of laying, and also to shade them from the influence of the mid-day sun, till the layers has taken hold of the soil by rooting themselves firmly. They will be rooted generally in about three or four weeks, and may be removed in two months.

When the roots of the layers have struck firmly in the ground they may then be cut off from the mother plants, with nearly an inch of the stalk below the incision attached to them, and with the root fibres as entire as possible. The sticky parts near the bottom and the top leaves must be trimmed off, and the young plants will then be fit for planting out either in beds or in pots, just as the inclination of the person laying may think fit. If planted in beds, they may be placed six or eight inches distant from each other with a dibber, and have a good watering every second day till they take fresh root, which will not exceed two weeks, and I consider the best time for separating the layers to be about the middle of March.

When the roots of the plants appear to be firmly fixed in the soil they should be removed with balls of earth about their roots, and potted in large or small pots, according to the fancy of the grower. If on removal from the mother plants they are to be potted, this may be done in pots No. 48, or larger, according to the number of plants to be placed in each pot; the compost should be good loam and leaf mould in equal proportions, which I have generally found to answer the purpose, and to produce strong plants, and fine flowers. After planting, I place the pots upon boards, slates, or tiles, that the intrusion of worms may be prevented, and about the middle of October I convey them to a place of safety to protect them from the winter frosts.

Unless very strong and sound, the plants from which the layers are taken, seldom survive, but it may sometimes happen that the young upper shoots be left, as is often the case when they are too short to be conveniently laid. These short shoots will of course continue the growth of the plant by promoting the absorption of the sap from the soil. The old plants

which are likely to survive after the layers are taken off, should be placed in the warmest situation in the garden, and be defended from severe frosts and heavy rains during winter, by mats and hoops. When the spring approaches the plants will require to be fresh potted like other plants; by this treatment it is likely they will become strong and healthy and grow flowers equal, if not superior to those they formerly produced.

ARTICLE. III.

ON A DESCRIPTION OF THE ALOE.

BY POWONA.

THE Aloe is a genus of succulent plants belonging to the natural order Asphodeleæ, and comprehends a considerable number of species which differ from each other exceedingly in the size, form, and surface of their leaves, in stature, and in the colour, size, and structure of their flowers. The greater part of them are mere objects of curiosity, are only seen in collections of succulent plants, and in this country they are generally placed upon lawns or before the edifices of gentlemen, where they have a very pleasing effect; but there are among them a species of very great value on account of its yielding the well-known medicine of the same name.

From what particular species the resinous substance called Aloes is procured, and whether the different samples known under the name of Hepatic, Soccotrine, and Horse Aloes are yielded by different species, or are only different qualities of the same species, are points not clearly settled.

All that appears certain is, that plants nearly related to Aloe perfoliata of Linnæus, which some consider as distinct species while others pronounce them mere varieties of the same, are what the drug is prepared from. In all probability, all the species of the genus, having an aborescent stem and thick succulent leaves, will yield the substance equally well.

That which has the reputation of producing the best aloes is A. Socotrina; a plant having, when old, a round stem, three or four feet high; leaves of a sword form a foot and half to two feet long, sharp edged, sawed, hard and pungent at the apex, often collected in clusters at the top of the stem, and red flowers

tipped with green, borne in clusters on tall stalks, which rise erect from among the leaves.

This plant is a native of the Cape of Good Hope, and the island of Soccotora, but is now commonly cultivated in the West Indies. The processes of preparing the drug are various. Sometimes the leaves are cut off at the base and placed in iron vessels to drain, until they have discharged all their juice, which is then inspissated; in other places the leaves are cut into slices and boiled for ten minutes, after which the water in which they had previously been boiled had evaporated, the resinous substance is left behind. Pressure is occasionally resorted to for the purpose of procuring the greatest quantity of juice.

Soccotrine aloes seem to be the purest kind obtained by draining only, hepatic or Barbadoes aloes are less pure, and may be obtained by boiling or slight pressure; while horse aloes are undoubtedly a coarse preparation of the dregs of the last-mentioned.

No plants can be more easy to cultivate artificially than the Aloe tribe. They are incapable of parting rapidly with water, and therefore they require to be planted in a soil that is very slightly retentive of moisture, so that they may not be gorged with it by their roots; for this reason they are potted in a compost consisting of little more than lime rubbish, mixed with a small quantity of ordinary soil, and carefully drained. They require a greenhouse which is capable of being maintained at a temperature not less than forty degrees in the depth of winter, at which time they ought to have no water whatever; in the summer they want no fire heat, but may be watered regularly, the supply being always according to their rate of growth, and likewise to the temperature of the air; that is to say, when in full growth and a high temperature, they may have abundance of water, but when growing slowly and in a low temperature, they should have but very little.

ARTICLE IV.

ON THE COMPOSTS FOR THE AURICULA.

BY ETHNIC.

THIS plant is grown in most of the poor artisan's gardens in the greatest perfection, for it is a plant that requires more care than all the florist flowers; in Manchester, the method of growing the plant, is this, the frame or pit is made of turf, built three feet high at the back, and two feet in the front, facing the south-east, with a wooden shutter or door to keep off the wet and frost, and to be taken off in mild weather.

In planting the Auricula for bloom, care should be taken to select strong young plants with strong hearts and sound, free from all decay, looking white and healthy round the shank or neck, the plants must be planted in rich light soil; the soil used in Lancashire is three parts rotten sheep dung, with one part light fresh mould mixed together and past through a seive or riddle; in Yorkshire the compost parts are one barrowful of dead leaves, one barrowful of cow dung two years old, one barrowful of decayed vegetable mould, and one barrowful of river sand mixed well together; in Lancaster it is similar to the above, in Suffolk dead fish is used instead of rotten cow dung, which they say grows them much finer than either horse, sheep, or cow dung. I have seen near Bristol some sorts that have been very fine and good flowers, which I have condemned altogether as not being fit for show, and if I had had them at several exhibitions, they would have stood the first; no doubt there is so much for situation and soil with this flower, that it would be difficult to describe which is the best, for it will grow very fine in either of those I have mentioned above, though it is so variously treated with growers who have many different means of mixing the compost with as various soils, as there is varieties of plants themselves.

But I believe the best way to have the frames, is to build them with a stage as figured in a former number of your Cabinet; if the frame was made so as to take away the back and front, and leave the glass on in wet weather, it would keep them dry and give them air at the same time, I am likewise sure the plants would be more healthy and not so liable to

damp off, as is in general the case with plants grown in pits or frames, as I have elsewhere described, they will retain their health only for a short time, for I know of no person growing them in pits but the stock has dropt off by a disease of rotting in the neck of the plants, when this begins there is no end till the whole stock has suffered; in this case examine the plants and you will find them to look of a purplish hue round the neck, they must then be carefully removed or the disease will infect the whole stock; my own frame is built of brick two feet high at the back and one foot at the front, with stakes at the corners three feet long at the back and two feet in the front for the doors, there is then a board one foot in breadth back and front on hinges, which is drawn up in rainy weather for the admission of air; this is the best plan that I know of for the culture of the *Auricula*, the number of varieties in cultivation have been given in a former number of the *Floricultural Cabinet*.

ARTICLE V.

ON THE CULTURE OF THE LOBELIA CARDINALIS.

BY EMILY ARMSTRONGE.

I WOULD not have offered these remarks on the above splendid flower after the able and pleasing statement made by An Ardent Amateur in a former number; but have experienced on trial that they can be grown with less care and trouble than described by him. In the month of October I removed the plants from the open border into pots eleven and twelve inches in diameter; the flower pots contained a mixture of yellow clay, light mellow loam and pit sand, previously well mixed and sifted; having no green-house, they were placed in a room having a south westerly aspect, there being no fire allowed while the plants remained in it. In the first week of the month of March I divided the offsets from the parent plant, not having done so the previous October; I am convinced that spring is the best season for such separation; all the offsets and parent plants were separately planted into pots of a smaller diameter, containing the same kind of soil. The last week of the month of March I turned each ball containing one plant (taking particular care that no portion of the soil should be separated from it,) into a border well sheltered from the

north-east and westerly winds, yet sufficiently airy and open. The south-eastern border was previously prepared thus, three inches of well rotted dung first laid in, four inches of well sifted light mellow loam, leaf mould, pit sand, and yellow clay, well incorporated together six months previous; the plants were then inserted into this, and never drooped whenever there was an appearance of frost at night, a flower pot was placed over each plant, and removed the succeeding morning. The growth of all weeds were checked around the plants by repeated turnings of the upper surface of the soil, which also refreshed the plants, during the dry season they should be watered abundantly two or three times a week with and without the rose on the watering pot.

By the above treatment I have had twenty-six plants from three parent roots in one year and all are of great magnitude promising an abundant bloom.

EMILY ARMSTRONGE.

July 25th 1837.

ARTICLE VI.

ON THE CULTURE OF CUTTINGS OR SLIPS OF DAHLIAS.

BY AN AMATEUR.

THE Dahlia has of late years so much engrossed the attention of Florists, that perhaps the following observations on the culture of slips or cuttings of that majestic and beautiful autumnal flower may not be uninteresting to your readers; the slips ought to be short branches taken off either by the hand or the knife from the main stem, or what is preferable, originating near the tuber itself; it being important to have as much as possible of the woody fibres at the joint, as the soft juicy part is apt to decay rather than produce roots. In the spring, indeed, when the eyes, have shot up two or three inches, the shoots may be broken or slipped off by pushing them backwards and forwards at the bottom and planting them about an inch deep in thumb pots, one in each pot, when they generally become fine plants and flower well. When the grower has no frame or hand-glass he must keep the potted cuttings close to the window glass of a room, so that they may have abundance of light: and if a

fire be kept in the room so much the better, though it is by no means so effectual for the rooting of the plants as stove heat. The cuttings may be protected out of doors, by covering them with inverted glass tumblers or jelly pots, but if a severe frost occurs, they must be put under cover, or their destruction is inevitable.

I find that in my practice the best method of forwarding Dahlias is to place for bottom heat tan or well rotted dung in a frame, the cuttings and young plants being moderately watered, giving as much light as possible, till the small pots are filled with roots, when they must be repotted into larger sized pots, using a compost of one third sandy loam, or common garden earth, one third leaf mould, or cow dung two years rotted, and one third white sand or scrapings. After this process is performed they must still be kept in a slight bottom heat till they are re-established in the pots; after which it is better to keep them in a greenhouse in a cold frame, or in the window of a room close to the glass, where no fire is kept; or if the weather be mild they may be set out of doors under well matted hoops, exposing them only for a short time, but before May this is hardly safe.

I have read in an Instructive Publication, that the growers who propagate for sale, prepare their hot beds in February, or the beginning of March, in order to have their plants ready to send out in May; but as that month is too early to risk the planting out of tender or valuable sorts, it is unnecessary for those who cultivate, for their own amusement, to prepare their hot bed before Lady-day, or the beginning of April. It may be made of fresh hot stable dung, something larger each way than the frame intended to be set on it, and after it is made up it must be allowed to ferment about a week, for the heat to subside a little. When the frame is to be put on, three inches of sandy soil should be sifted over the dung on which the tubers are to be laid, and covered with similar soil, or with dry moss, taking care to leave the crown of the tuber above the level of the soil. If much heat arise, the back of the lights must be raised a little so as to admit the fresh air and permit the escape of the steam; but at night matting secured from being blown off by the wind will be requisite unless the weather prove very mild, and must from time to time be sprinkled with warmish water. When the eyes push

out shoots, more light will be wanted than before, but greater care will also be necessary to guard against cold at this uncertain season of the year,

AN AMATEUR.

ARTICLE VII.

REMARKS ON THE SHRUBBERY.

BY REV. HENRY HILL, A. M.

(Continued from page 112.)

In addition to the trees and shrubs, which will be noticed in this work as flowering the latest, aid should be borrowed from such autumnal flowers as continue gay until the approach of winter. The towering hollyhock, when half concealed, and half seen through the shrubs and evergreens, is one of the boldest enliveners of the plantation at this season. This plant yields to none in beauty of form, majesty of carriage, or gaiety of colour its hues proceed through all the tints of crimson, from the palest rose to the deepest purple; and from the purest white through all the shades of yellow, orange, and iron-brown. The tall sun flower should also figure in the back ground; and the middle space may be allotted to the richly varied decia of the western world. The foreground is to be rendered splendid by large plots of the asters of China, the general tints of which, inclining to blue or purple, contrast well with the more gaudy colours of the African marigold, or the nasturtium of Peru, which latter should be suffered to climb the holly or other trees, exhibiting its flaming petals to enliven the closing year.

In young plantations, where the evergreens have not spread sufficiently to cover the surface, clumps of wall-flowers are exceedingly ornamental, and their green, which is of the most agreeable tint, lasts through the winter, they often flower both late in the autumn and early in the summer. The periwinkle is also an excellent running plant to cover the slopes and banks of the shrubbery, as its blue flowers are to be seen amidst its ever-green leaves, from March to the middle of November.

It must not be forgotten that England possesses advantages over every other part of the globe for ornamental gardening; first the fineness and beauty of its turf, which retains its verdure

throughout the year without much labour or expense ; whilst on the continent, this is obtained only by the assistance or partially concealed means of irrigation. The few lawns that are kept in any tolerably decent order abroad, are generally under the care of Scotch or English gardeners. The gravel of this country is also so superior to that of any other part of Europe for the formation of walks, that the royal gardens of Naples have their paths covered with gravel brought from the distance of Kensington. Perhaps there is no one spot where the plants of the north and south thrive so well together as in the English shrubbery. Added to these advantages, the absence of ravenous beasts and venomous reptiles, are blessings that ought to make us

“ Vain of our beauteous isle, and justly vain,
For freedom here, and health, and plenty reign.”

As it is the skilful distribution of trees over the grounds, more than their peculiar character, which adds dignity to the landscape, so it forms one of the most important parts of the planter's study to discover where to place the rising grove in such a situation as to improve the view. In a flat country, the first care should be to give an additional appearance of height to spots already elevated, by planting upon them the tallest trees that the soil will suit. In parks and paddocks, the belt or long plantation, should generally be avoided, as well as that of the crescent shape, because they prevent a free circulation of air, and render the enclosed atmosphere unwholesome. Oblong or circular plantations, on the contrary, afford the trees an opportunity of benefiting by the air ; admitting, at the same time, a view of the landscapes which they partially intercept.

“ The fountain's fall, the river's flow,
The woody vallies warm and low ;
The windy summit, wild and high,
Roughly rushing on the sky !
The pleasant seat, the ruin'd tower,
The naked rock, the shady bower.
The town and village, dome and farm ;
Each give to each a double charm,
As pearls upon an Ethiop's arm—

DYER.

The principal feature of the park should be grandeur, and the boldest points of the surrounding country should be made subservient to the scenery by that arrangement of the plantation which will give such prospects the greatest advantage. Yet should the park exhibit some signs of refinement, by the softening down of particular parts by means of varying tints, so as to give greater contrast to the natural scenery.

"Here groves arranged in various order rise,
And bend their quiv'ring summits in the skies.
The regal oak, high o'er the circling shade,
Exalts the hoary honours of his head.
The spreading ash a differing green displays,
And the smooth asp in soothing whisper plays,
The fir that blooms in spring's eternal prime,
The spiry poplar and the stately lime."

ARTICLE VIII.

ON WATER AND WATERING PLANTS.

(Continued from page 284.)

"Those persons who are conversant in Agriculture will easily submit to this.

They are well aware that though their earth be never so rich and good, and so fit for the production of corn and other vegetables, yet unless the parts of it be separate and loose, little will come of it.

It is therefore upon this account that they bestow the pains they do in the culture of it, ploughing, harrowing, and breaking the clodded lumps of earth.

It is the same way that sea salts, nitre, and other salts promote vegetation; and he says he is sorry that he cannot subscribe to the opinion of those learned gentlemen, who imagine that nitre is essential to plants, and that nothing is acted in the vegetable kingdom without it.

For by all the trials he has been able to make, the thing is quite otherwise; and when contiguous to the plant, it rather destroys it than otherwise.

But this nitre and other salts certainly do; they loosen the earth, and separate the concreted parts of it; and by that means

fit and dispose them to be assumed by the water, and carried up into the seed, or plant, for its formation and augment.

There is no one but must observe how apt all sorts of soils are to be wrought upon by moisture, how easily they liquate and run with it; and when these are drawn off, and have deserted the lumps wherewith they were incorporated, those must moulder immediately and fall asunder of course.

The hardest stone, if it happened as it frequently does, to have any salt intermixed with the sand of which it consists, upon being exposed to a humid air, it in a short time dissolves and crumbles all to pieces; and much more will clodded earth and clay, which is not near of so compact and solid a constitution as stone is.

The same way likewise it is that lime is serviceable in this affair. The husbandman says of it, that it does not fatten but only mellow the ground. By which they mean, that it does not contain anything in itself that is of the same nature with the vegetable mould or afford any matter fit for the formation of plants, but merely softens and relaxes the earth, and by that means renders it more capable of entering the seeds and vegetables set in it, in order to their nourishment, than otherwise it would have been.

The properties of lime are well known and how apt it is to be put into a ferment and commotion by water; nor can such commotion ever happen when lime is mixed with earth, however hard and clodded that may be, without opening and loosening of it.

Observation 4. The plant is more or less nourished and augmented in proportion, as the water in which it stands, contains a greater or smaller quantity of proper terrestrial matter in it.

The truth of this proposition is so eminently discernable through the whole process of these trials, that, he thinks no doubt can be made of it.

The mint in the glass C, was much of the same bulk and weight with those in A and B; but the water in which that was, being river water, which was apparently more stored with terrestrial matter than the spring or rain water, wherein they stood, where it had thriven to almost double the bulk, that either of them had and with a less expense of water.

So in a like manner the mint in L, in whose water a quantity of good garden mould had been dissolved, though it had the disadvantage to be less, when it was first set, than either of the

mints H or I, the water of which was the very same with that in L, but had not any of the earth mixed with it ; yet in a short time, the plant not only overtook, but much outstript all those ; and at the end of the experiment was very considerably bigger and heavier than either of them.

Also the mint in N, though it was less at first than that in M, being set in that turbid, thick, succulent water, that remained behind after that wherein M was set, was distilled off, had in the end more than double its original weight and bulk, and received above twice the additional increase, which that in M had done, which stood in the thinner distilled water, and which is as considerable, had not drawn off half the quantity of water which that had.

The reason why in the beginning of this article he limits the proportion of the augment of the plant to the quantity of the proper terrestrial matter in the water, is because all, even the vegetable matter, to say nothing of the mineral, is not proper for the nourishment of every plant.

There may be, and doubtless there are some plants that are much alike in different species of plants, and so owe their supply to the same common matter ; but it is plain all cannot. And there are other parts so differing, that it is no ways credible, that they should be formed all out of the same sort of corpuscles ; nay, it is so far from it, that there does not want good indications, as will be seen by and by, that every kind of vegetable requires a peculiar and specific matter for its formation and nourishment, yea, each part of the same vegetable does so ; and there are very many and different ingredients that go to the composition of the same individual plant.

If therefore the soil, wherein any vegetable or seed is planted contains all, or most of these ingredients, and those in due quantity, it will grow and thrive there, otherwise it will not.

If there be not as many sorts of corpuscles, as are requisite, for the constitution of the main and essential parts of the plant, it will not prosper at all. If there be these, and not sufficient plenty, it will starve and arrive at its natural stature ; or if there be any the less necessary and essential corpuscles wanting, there will be some failure in the plant. It will be defective in taste, in smell, in colour, or some other way.

(To be continued.)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. *CEREUS PENTALOPHUS* var. *SUBARTICULATUS*. *Fine winged*
Cereus [Bot. Mag. 3651.

CACTEÆ. ICOSANDRIA MONOGYNIA.

This very pretty flower and rare species has bloomed in the fine collection of Messrs. Mackie, Norwich. The flower is nearly four inches across, of a fine rose colour, merging nearly into a white centre, where the yellow anthers, and dark blue and green anthers, which show in a neat contrast with the other colours.

2. *CRYPTOCHILUS SANGUINEA*. *Blood coloured flower.* [Bot Reg. 23.

ORCHIDACEÆ. GYNANDRIA MONOGYNIA.

This very pretty orchideous plant is a native of rocks in the northern provinces in India. It has bloomed in the fine collection of Messrs. Lodiges's. The plant belongs to the section *Epidendrææ*, and bears affinity to *Acanthophippium*. The flowers are produced in spikes, of twelve or more upon each, of a bright scarlet colour. *Cryptochilus*, referring to the concealed lip.

3. *ECHINACEA DICKSONIA*. *Mr. Dickson's* [Bot. Reg. 27.

ASTERNACEÆ. SYNGENESIA POLYGAMIA.

A native of Mexico, the seeds of which were presented to the London Floricultural Society by G. F. Dickson, Esq. The plant is a perennial, probably hardy enough to endure an ordinary winter in the open border; but as the roots bear being taken up and preserved through the winter in dry sand in a similar way to which some persons preserve the *Dahlia*, it is advisable to take the same precaution with it. The plant blooms from the early part of August to the end of September or later. The flowers are very showy, of a carmine rose-colour, slightly streaked with white, having a yellow centre, each bloom about four inches across, they are produced very numerously. Blooming so late in the season, the plant rarely produces seeds in the open air, when such are desired it is advisable to take a plant into the greenhouse, where by blooming earlier, seeds are readily obtained. The plant does not bloom the first season, so that the plant requires to be sown as an half hardy annual in March, and be planted out in the open border about the middle of May. *Echinacææ*, from the adjective *Echinaceus*, bristly, alluding to the sharp scales of the receptacle.

4. *EPIDENDRUM OCHRACEUM*. *Yellow Ochre coloured.* [Bot. Reg. 26.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native of several parts of tropical America, Messrs. Lodiges's possess it, and received it from Oaxaca, Mr. Skinner discovered it in Guatamala. Captain Sutton brought a plant from thence to this country, and presented it

to Sir Charles Lemon, in whose collection at Carcleu, it bloomed in 1836. The flowers are produced in a scape, which rises to the height of six or eight inches, each scape having ten or twelve. The sepals are of a dingy brown outside and paler within. Labellum of a purplish white; each flower is about half an inch across.

5. *BARTONEA AUREA*. *Golden flowered.*

[Bot. Mag. 3649.

LOASEA. ICOSANDRIA MONOGYNIA.

This is a very fine and showy annual, growing about three feet high, and flowering very freely. The blossoms are of a fine yellow, near three inches across, resembling a yellow *Oenothera*. *Bartonia*, in compliment to Dr. William Barton of Philadelphia.

6. *REHMANNIA CHINENSIS*.

[Bot. Mag. 3653.

SYNONYM, *GERALDIA GLUTINOSA*, *DIGITALIS GLUTINOSA*.

A native of China, growing upon the walls around Pekin, where it was collected by Dr. Bunge. The plant grows to about a foot high, the flowers resemble in form the well-known *Mimulus glutinosa*, but the colour and marking is very similar to *Justica picta*, or *bicolor*, of a yellowish white, with dark centre and striped, the outside of the flower purple. It is a very pretty and interesting plant, requiring to be grown in the greenhouse.

7. *PIMELEA INCANA*. *Hoary*

[Bot. Reg. 26.

THYMELLACEA. DIANDRIA MONOGYNIA.

Seeds of this new species were sent from Van Dieman's land to Miss Copeland of Leighton, in whose collection it has recently bloomed. Though the plant was raised from seed in 1834, it is now a bushy plant, attaining the height of five feet. The plant is a profuse bloomer. The flowers are white on the upper side, and pink beneath.

New or Rare Plants noticed at different Nurseries.

ONCIDIUM TETRAPETALUM. This beautiful flowering little species was sent from Jamaica by J. H. Lance, Esq., and it has bloomed in the London Horticultural Societies' garden. The flowers are small, the labellum is of an alabaster white, excepting its base, which is yellow and brown. The petals and sepals are spotted, streaked and barred with brown, and the column has two large spotted wings.

CONESPERMA GRACILIS. A neat greenhouse climber, the flowers are small but are produced in profusion, they are of a bright blue colour, and have an interesting appearance. It has bloomed with Mr. Young of Epsom.

ZICKIA WALLE. A very pretty flowering greenhouse plant, which has recently bloomed with Mr. Lowe of Clapton nursery, the flowers are very similar to *Kennedia coccinea*, and have an interesting appearance.

JASMINUM LIGUSTRUM a handsome greenhouse species with white flowers which are delightfully fragrant.

CLEMATIS MONTANA. This new and interesting species is in the collection of Mr. Groom of Walworth. The flowers are white, and probably it will prove as hardy as *C. Sieboldii*,

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON FUCHSIAS, &c.—A constant subscriber would wish to see figured in the Cabinet, at some early occasion, one or two figures of the new, high priced Fuchsias; and he would be glad to know where the new *Datura Gauyaquilien-sis* can be procured, its price, and a few hints on its culture; also, where can *Delphinium Barlowi* be procured, and its price,

LIMERICK.

ON A NEW MODE OF HEATING HOT-HOUSES, &c.—G. R. being informed of a new plan being discovered for Heating Hot-Houses and Green-Houses, at a far less expense than that at present in use by steam, or flues, will feel obliged by the Conductor, or Readers of the Floricultural Cabinet, (to which he has been, with many friends, a Subscriber to, from No. 1.,) inspecting the same which is to be seen at the Jerusalem Coffee House, Cooper's Court, Cornhill, London, a report of which he should like to see in the July Number.

G. R.

ON DESTROYING ANTS—Permit me to enquire through your interesting publication the means to be adopted for the destruction of the Ant, which infests the pit of my conservatory, and causes the flowers as well as leaves of the Orange plants in the same to fall off, and the plant to look unhealthy. The pots of Roses, as well as Oleanders are also infested with the said insect. Coal tar, tobacco, snuff, lime, &c., I have severally applied, but all of no avail. Any remedy you, or any of your numerous correspondents, can suggest, will be esteemed a favour, by Sir, your patron and admirer of your Cabinet.

Q.

ANSWERS.

ON FORCING ROSES.—In answer to your correspondent Rosa, relative to Forcing Roses, I have sent a brief account of the best plan I know. He must in the first place collect an equal portion of good substantial loam, rotten leaves, and very rotten dung from an old cucumber bed, mixing them well together, then procure some pots from nine to twelve inches in diameter, putting three plants in a pot; I repot the plants I forced last January and February about the latter part of August, then let them remain in the open air until December, when I remove them into the hothouse, but before I take them there I cut back the young shoots to two or three eyes of the old stem. For the first three weeks I keep the house to sixty or seventy degrees of heat, then I increase it to eighty or ninety degrees: I would not recommend forcing them sharp in the first place, as that prevents their breaking strong, and consequently there would not be so many flowers, but if your correspondent follows the plan I have before recommended, he will find it to answer his expectations.

R. J. W.

REMARKS.

ON DEFORMED FLOWERS, &c.—A lady residing in the neighbourhood of Bathurst, New South Wales, has observed some curious phenomena in her garden, which she thinks of sufficient interest to be inserted in the pages of

the Floricultural Cabinet: as some of its readers may be able to account for these singular productions of nature. Mignonette (for instance) would here and there throw out a strong shoot, resembling tree mignonette, without perfume; and the seed pods formed without seed in them, and larger than usual. Out of those pods sometimes grew flowering tops of fragrant Mignonette. She has felt much pleasure in cultivating the seeds she brought from England, and has observed in many of the plants she raised, that after the first flower or two had opened, many of the succeeding flowers became green, and scarcely like the flower in shape; somewhat similar to a calyx without a corolla. On the *Hibiscus Africanus*, some shoots flowered very well, and others produced only small, green calyxes. She could only save one *Nasturtium* seed, all the flowers being imperfect, green and diminutive.

A friend in England has regularly sent her the Floricultural Cabinet, from which she has derived much useful information.

The following one hundred sorts of Heartsease were recently exhibited at a Floricultural Exhibition, which are of first rate characters, and obtained the first prize. I took the names of each, and sent the list for insertion in the Cabinet. Those marked with an asterick I considered the best.

X. Y.

*Enterprise	Aurora	Lady Peel
*Masterpiece	*Minerva	*Duke of Marlborough
*Hecuba	Momus	*Do. of Northumberland
*Lord Glammas	Somnus	Richardson's Adelaide
Prospero	Cecilia	*Claude
Nonpareil	Samson	Caravan
*Incomparable	*King	Gem
Cicero	Josephus	Emperor
Royal Lilac	Homer	Diomede
Beauty of Tottenham	Flora, Roger's	Brutus
Lady Blessington	Do. Hollis's	Scot's Helen
Corrinna	Do. Mountjoy's	Countess of Bridge-
*Deademonia superba	Cupid	water
*Diana superba	Jem Crow	Do. of Verulum
Immutabilis	Battersea Beauty	Cato
Donna Maria	Politor	*Andromache
High Admiral	*Emma	*Enchantress
Purpurea perfecta	Incomparable	Matchless
Frogmore Beauty	Vesta	*Pomona superba
Columbine	Romeo	Radical Jack
Nabob	*Lilac perfection	Atropurpurea
*Queen Victoria	Expression	Beauty of Ealing
Purpurea Elegans	Fair Rosamond	Cromwell
Achilles superb	King of Oude	*Chimpanzee
Goliath	Pizarro	Coronet
Queen of Scots	Parragon	Horace
John Bull	Blucher	Laxiflora
Wild's Defiance	Apollo	Nimrod
King's Alfred	Susannah	Beauty of Dalton, Smith
Bacchus	Prince Eugene	Paris
Wallace	Crocus superba	Theresa
*Shakespeare	Hornsey Hero	Glaucus
Comus	Rainbow	Battersea Hero
Royal Purple	Pencilatum	

THE LATE MR. ANDREW KNIGHT, Esq.—This estimable man known for so many years as the President of the Horticultural Society of London

expired on Friday last, after a short illness, at the house of his daughter-in-law, in Upper Seymour-street, at the advanced age of seventy-nine. He arrived in London on the evening of the 30th of April, in a tolerable state of health, for the purpose of attending the anniversary meeting of the Horticultural Society, on the following day, on which occasion he has, with very few exceptions, presided, since his first becoming President in 1811; but the fatigues of the journey, combined with the debility consequent upon his advanced years, prevented his attendance. It was generally remarked by those who had the opportunity of seeing him at the preceding anniversary, that that occasion would be his last; a prediction which has been too truly realized, for the Society of which he was the distinguished head. In their President, the Horticultural Society has lost the principal, if not the sole tie which attached them, to the republic of science, and have probably met a loss they can never compensate.

In the future ill-assorted mass which compose their transactions, the hand of the master will be no longer recognized, and death has struck a blow that will do more to annihilate the sophistry and imbecility of their management than any other event that could possibly have happened.

Mr. Knight was born at Wormeley Grange, in Herefordshire, in 1759. His father, be it observed, was a man of much learning and acquirements. Having great power of mind, and living in an extremely quiet and sequestered spot, he was supposed by his ignorant neighbours, in their language, "to know every thing." He died at an advanced age, when Mr. Knight was an infant; an evidence of the respect his knowledge obtained him, whenever his son sought to know in childhood, for any unusual subject, he was told, "that his father would have answered him, but that nobody else could." Being born in the midst of orchards, he observes, "I was early led to ask whence the varieties of fruit I saw, came, and how they were produced. I could obtain no satisfactory answer, and was thence led first to commence experiments, in which, through a long life of scarcely interrupted health, I have persevered, and probably shall persevere, as long as I shall have the power."

Mr. Johnson, the author of a work on English Gardening, published in 1829, thus sums the character of this individual:—"If the question was put to me, who is the most scientific horticulturist now living? who unites to a knowledge of the practices of gardening, the most perfect knowledge of the sciences that assists it? which of living horticulturists have conferred the greatest benefits upon our art? I should quote Mr. Knight, in reply to them all. Whether we follow him in his researches as a physiologist, in his luminous observations and discoveries respecting the sap of plants; as a general cultivator in the numerous papers in every branch of horticulture in the transactions of the Society of which he is President, and especially in the raising of improved fruits and culinary esculents, we find in all, the most ample justification for our opinion, that he is the first floriculturist of our times. Nor is he eminent alone in the higher walks of horticulture, for at Downton Hall, he demonstrates that he is capable of securing the correct performance of every detail of gardening."

Mr. Knight was one of the earliest promoters of the Horticultural Society, his name being inserted in the charter of incorporation first granted to that body. On the death of Lord Dartmouth, the first President, in 1811, he was elected to fill that office, which he held to the period of his decease. Until even the latter period of his life, he was a constant, and almost the universal contributor to the transactions of the Society, whose death will prove a great chasm. Although distinguished particularly for his attention to fruits, he, was well versed in every department of horticulture; and if his researches in vegetable physiology have not tended much to the improvement in that art, they show proofs of enlarged thought. His fortune was not princely, but his gifts to the promotion of science, were munificent, and

his domains in Herefordshire displayed a very interesting development of the principles of modern horticulture.

Mr. Knight was the author of many valuable Works, independent of his extensive contributions to the Transactions of the Royal and Horticultural Societies.

NEW OR RARE PLANTS NOTICED

IN VARIOUS NURSERIES, &c.

At Mr. Grooms, Walworth.—*LELARGE ORNATA*. A new and pretty plant at £5 5s. each, it has not yet bloomed. Also *DIPLOLOENA DAMPIERII*, £5. each, neither of the species have yet bloomed with Mr. Groom. The Tulips are in most vigorous growth, and are grown in amazing multitudes; one bed is valued at £1500. The show will be most splendid, and well worth going a considerable distance to see.

At Messrs. Chandler's, Vauxhall.—Their collection of Camellias were in fine bloom. The following were the most superb. *CANDEISSIMA*, *EKINIA*, *DONCKLERII*, *EXIMIA*, *ROSA SINENSIS*, *PARKSI*, *BEALII*, *VANDESHIA*, *FLORIDA*, *SANGUINEA*, for the description of colour we refer our readers to the excellent lists by Camellia in former numbers. The collection of Hybrid Rhododendrons are in splendid bloom, and some of the kinds are very much superior in beauty to anything we have seen. We shall notice them (more particularly) in our next number. To see them in bloom will amply repay for a journey. A very magnificent Hybrid one we saw in bloom at Mr. Milnes, Stoke Newington Nursery, having seventy-five heads of flowers.

DIASMA CAPITATA.—A beautiful greenhouse plant, forming a neat bush, and blooming most profusely. The flowers are of a bluish-purple. It is as hardy as a Myrtle.

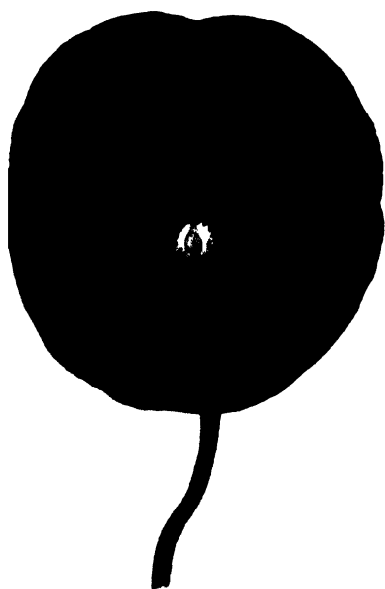
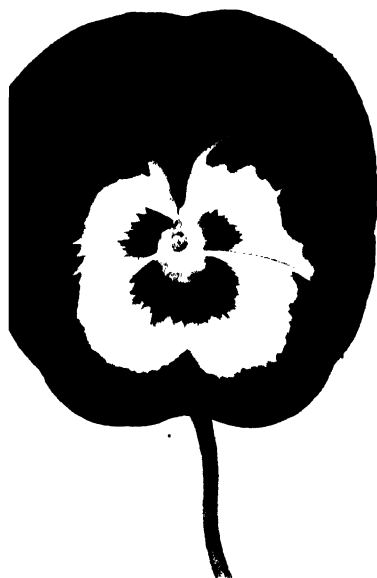
CAMELLIAS. The show was most brilliant, and some of the kinds are grown, to large bushes, ten or twelve feet high, and literally loaded with flowers. To walk amongst them is like going through a forest of Camellias. It would amply repay a visit to view them. We shall remark on various kinds in our next month's number.

ACACIA CULTRIFORMIS.—Messrs. Rollisons of Tooting Nursery, have had this plant beautifully in bloom, bearing a profusion of fine yellow flowers. It is a desirable plant to turn out in a conservatory.

RIBES MENZIESII.—The late Mr. Douglas sent seeds of this rare and little known species from California. The young shoots are densely clothed with slender bristles, very much like *R. Lacustre*, but is very different in its flowers. Those of *R. Menziesii* are of the same colour as *R. speciosa*, with the exception of being a little paler; they are smaller, and without the high projecting crimson coloured stamens, which appear so beautiful in the flowers of this last named species. The plant appears to be quite hardy; it is at the London Horticultural Society's Garden.

DENDROBIUM CANDIDUM.—This new and fine species has been sent from Nungelaw, in India, by Mr. Gibson, collector to the Duke of Devonshire, and it has bloomed at Cataworth. The flowers are of a pure white, most powerfully fragrant. The habit of the plant is that of *D. Nobile*; growing erect.

RHODODENDRON SMITHII. The show of this splendid plant was most magnificent at Messrs. Chandlers, we may add, was unrivalled. They possess the original true variety, which far exceeds in beauty some other kinds



Duke of Marlborough

N. pinus ultra

which are set out for the original. There was also a splendid show of many other hybrids, with flowers of various hues, certainly the finest kinds we ever saw. Further descriptions of them we will give hereafter.

MATHIOLA ODORATISSIMA. A most interesting plant of the well-known old species, called the Night-scented Stock. The plants are, however, much more vigorous, the flowers more than twice the size, and of a paler colour. They are delightfully fragrant, and the plant merits a place in every collection where a ready access can be had to it in the evening.

Mr. Chandler informed us that during the last severe winter, that all their fine collection of hybrid Rhododendrons, which were growing in the open ground and were raised between *R. Cataubiense* and *R. arborea*, had not suffered in the least, whilst those from *R. ponticum* and *R. arborea*, were all dead.

MILTONIA SPECTABILIS. A new Brazilian Orchideous plant, has lately bloomed at Messrs. Lodiges's, also with J. Baker, Esq., Springfield. The flower is produced in a scape, of only one in each, the sepals and petals are of a pale greenish yellow, and the labellum of a fine violet colour.

REFERENCE TO PLATE.

It being the season when beds of Pansies can be successfully made to bloom during the end of summer, and when they are exhibited at most shows, we have given the present plate as suitable to the time, that our readers may see that the kinds were exhibited, or procure them for cultivation.

The four Pansies we have given are the four most perfect flowers we could find during a tour we have recently made to view and procure all the best kinds, and attending several of the Metropolitan exhibitions, as well as others in the country. We are sorry to state that our engraver has, from not understanding our order correctly, misplaced the names of two of the pansies, which we did not discover, till too late to remedy. The one named Duke of Marlborough, should be "*Ne plus Ultra*," and that named *Ne plus Ultra*, be "*Duke of Marlborough*."

FLORICULTURAL CALENDAR FOR JUNE.

ANNUALS.—See pages 43, and 72, Vol. I.—Those annual plants that have not yet been transplanted out, should now be done, in cloudy and showery weather, keeping as much earth to their roots as possible, now supporting those with sticks that require it—thin out where too thick. Tender annuals may now be turned out into the flower borders; they should be refreshed at least once a day with water, and if the sun be very powerful they will require to be shaded, till they have taken fresh root: those that remain to flower in pots, must be frequently supplied with water, repotting, &c., as they require it. Finish transplanting perennial and biennial plants, sown in spring.

ROSES.—Cutting of Garden kinds may be put off by the middle of the month; insert them firmly in the soil, and cover with a hand-glass—a shady border is the best situation for them. Cuttings of most kinds of Greenhouse plants should now be put off.

CARNATIONS AND PINKS.—Laying the former, and piping the latter, will be required by the end of the month. Seedlings should be planted out singly into pots or open borders. Those Carnations in pots require particular at-

tention in keeping them well supplied with water, and to support the flower stems by tying them to neat green sticks with bass; pipings of the young shoots may still be put in; those cut at the second or third joint make the handsomest plants; they should be kept shaded from the hot sun, otherwise they will soon get scorched and dried up, they should be finished layering by the middle of the month. Pinks may still be propagated by pipings as in June. Anricula plants in pots will require a little water frequently in hot weather taking care not to pour it on the heart of the plant—all dead leaves should be removed—if any of the plants are attacked with the green fly, they should be smoked with tobacco.

RANUNCULUS AND ANEMONE ROOTS.—Should any bulbous rooted plants, as Ranunculuses, Tulips, Anemones, &c., now be past flowering, and their leaves decayed, they should be taken up, well dried, cleaned, and the offsets separated, and put in a cool airy place, till the planting season again commences.—See Articles in Vols. 1. and 2, of the Cabinet.

CAMELLIAS—which have ceased blooming, will now require to be excited by being taken to a higher degree of heat, and frequently syringed, this will induce vigorous shoots and an abundance of flower buds.

CHRYSANTHEMUMS.—See pages 73, 74, and 81, of Vol. I. Plants in small pots should be repotted into larger.

DAHLIAS.—See pages 3, 22, 66, and 95, of Vol. I.; and articles in Vol. 2, and Vol. 3, page 100.

TULIPS.—See page 21, Vol. I.

GREENHOUSE AND STOVE ANNUALS.—Such as have been grown hitherto in small pots, should be repotted into larger for the summer's growth.

AURICULAS—may now be repotted and be placed in a shady, but airy, situation. Transplant seedlings, also of Polyanthus.

PANSIES—New beds may be made by taking off rooted offsets or by piping, shading them for a few days after removal. Such will bloom profusely at the end of summer.

CAMELLIAS.—If the new shoots have nearly done growing, place the plants in a warm greenhouse, or in a stove at 70 degrees, in order to assist the plants in producing flower buds.

HERBACEOUS PLANTS—in flower beds should regularly be tied up as they advance in growth, not allowing them to grow too far before this attention is given, or many kinds will become unsightly.

BALSAMS.—See culture of, in Vol. I.

TRIVERANIAS.—See Vol. I.

SEEDS of hardy Biennials, as Sweet Williams, Scabious, &c., may be sown for plants to bloom next year.

THE DOUBLE SCARLET LYCHNIS, &c., &c.—The double scarlet Lychnis, and such like plants, should be propagated by cuttings. Dahlia cuttings will easily take root if placed in a brim heat. Continue to cut box edgings, and hedges, where it was not done last month. Where it is desired to save seed of Ten Week, Russian, or German Stocks, only allow those single ones to remain, the flowers of which have five or six petals: if such be reserved they will generally produce double flowering plants. Towards the end of the month, Roses may be budded: the first week in August is however considered better. An article is sent on the subject for that month.

THE FLORICULTURAL CABINET,

JULY, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

REMARKS ON THE PROPERTIES OF THE TULIP.

BY MR. JOHN SLATER, ALBION PLACE, LOWER BROUGHTON, NEAR MANCHESTER.

THE properties requisite to constitute a fine Tulip are as follows. The stem ought not to rise less than from thirty inches to three feet and upwards, from the surface of the bed, strong and elastic, so as to shew the flower to the best advantage, which a short weak stem cannot. A flower must not be despised or discarded because it does not rise to the prescribed height, as there are many fine varieties which does not come up to this standard. The cup of the flower should be proportioned to the stem, that is, a tall stem, should support a large flower, and *vice versa*, so as to appear neither too light nor too heavy, composed of six thick and fleshy petals which should run out from the centre at first a little horizontally and then turn upwards, forming almost a perfect cup with a round bottom, rather wider at the top, the three exterior petals should be larger than the three interior ones, and broader at the base. The opinion that the exterior should be larger than the interior (an effect almost at variance with experience) has been copied by all who have attempted to describe a fine tulip, but in my opinion a flower whose petals are equal in size and form; will, when expanded, present the most admirable

form, and make the nearest approaches to that perfection which all florists imagine, but few witness.

The top of each petal ought to be broad and well rounded and perfectly level; the parts of fructification, as the stamens, anthers, and pericarpium, should be strong and bold, and the filaments free from tinge or stain, as those qualities add much to the appearance of a fine tulip when expanded. The ground colour of the flower at the bottom of the cup in a bizarre, ought to be a bright yellow, and in a byblomen or rose, perfectly white and transparent. In a feathered flower, the feathering should be broad and regular, and go quite round the edge of the petal, and not to break out at the end, and show the ground colour, and terminate in fine broken points toward the centre of the petal elegantly pencilled. The centre of each petal should be quite free from any stripe, spot, stain, or tinge of any kind. The feathering of a fine *Bienfail Incomparable*, will give the young florist the best idea, for when fine, it is not excelled as a feathered stage flower.

A flamed Tulip must have a beam right up the centre of each petal, as near the colour of the feathered edgings as possible, commencing nearly at the bottom of the petal, and reaching up to the feather at the top of the petal, but not to break through it branching or flaming all the way up on each side of the beam to the feathering at the edge, the feathering at the edges the same as in a feathered flower. The *Albion*, (or *Lortortescue* as it is called) and *Rose Unique* may be considered as specimens of flamed Tulips. The darkest colours in the bizarres rank the first, brown the second, and scarlet the third. In byblomens, black first, dark purple second, and light purple third. In roses, bright scarlet first, crimson or cherry colour second.

The properties thus described are acted upon at all Floral exhibitions in the northern counties, yet it must be admitted that flowers with bad cups and tinged bottoms are often placed first, in preference to a fine cupped flower. This is owing to the feathering of the flower counterbalancing the other bad properties, whilst the one with a good cup, &c. may be very fine in every respect but the feathering and flaming. The southern florists reject as not worthy a place in their collections, what is considered in those of the northern districts as first-rate stage flowers. The northern florists only, in a very few instances, cultivate what is termed bed flowers. If a flower will not come up to their stan-

dard, it is rejected. They appreciate a Tulip possessing a good cup, &c. but it must have the other properties before enumerated combined; for, instance, Charles the Tenth, Count de Vergennes, Triomphe Royale, Surpasse Catafalque, Old Dutch Catafalque, Captain White, Thalestris, Reine de Sheba, Imperatrix Florum, David, Charbonnier Noir, Louis the Sixteenth, Walworth, and many others admired in the south, are also considered by them as first-rate stage flowers when in a good state. I understand that in the south, a Tulip is called fine when it is a large flower, good cup, and bottom free from the least tinge, even if the feathering and flaming is deficient, whilst the northern florists, in addition to a good cup, and bottom free from tinge, that the Tulip ought to be either regularly feathered, or feathered and flamed.

A Tulip is not considered defective in the south, if it has only a straight beam up the centre of the petals, without its branching to the feather, whilst in the north would be thrown aside as possessing neither the properties of a feathered or flamed flower. Also they prefer a light delicate feather to a heavy one, which is quite the contrary in the north.

Having thus briefly pointed out the differences existing in the judgment of the Tulip in the northern and southern districts, I trust that this article will induce florists to fix one standard whereby all Tulips shall for the future be compared. I would suggest that the properties of Tulips be divided into parts, so many allowed for cup, size, and bottom, and the rest for the marking of the flower. This would, of course, obviate all unpleasantness arising from the northern florists sending them what ranks here as first rate stage flowers, which does not possess the requisite properties for exhibition in the south.

All florists must acknowledge that a good cup and bottom add much to the merits of the Tulip, and I do not doubt from the interest now taking in the raising of seedlings, that in time all tinged flowers will be discarded and discountenanced as stage flowers.

ARTICLE II.

ON THE CULTURE OF TROPÆOLUM,

BY MR. JOHN FYFFE, GARDENER TO THE REV. WILLIAM MANSFIELD, MILTON
BRYANT RECTORY, BEDFORDSHIRE.

ALTHOUGH all the Tropæolums are easily grown, some care is required in starting them from bulbs. The general way of treating these plants, is to put them into a little heat, but I have found this mode of treatment to be hurtful to Tropæolum tricolorum, when first exciting it from a dormant state. If the bed is fresh and a strong heat, it is in danger of being scorched, even if you succeed in its starting, as this species is so very tender in the first stage of its growth.

The method which I have found to be most successful in growing the more tender sorts of these interesting plants from bulbs, is to pot them in a mixture of good rotten leaves, peat, loam, and sand; say one part of each, or one-half leaves, one-fourth loam, and one-fourth sand, placing the bulb in the centre of the pot, leaving the crown all exposed on the surface of the pot, and placing the lower extremities in a layer of white sand, which protects it from rotting if overwatered, and to guard more effectually against this, the pot should be well drained, and very little water given; until such time as the bulb is in a growing state the pot should be placed in some airy part of the greenhouse, and a bell glass put over it. If the weather is hot, and much sunshine, a little shade should be put over it during the heat of the day, and the glass must be daily wiped to clear it of the condensed vapour, and left off for a time as in the treatment of cuttings.

The most successful mode of growing Tropæolum pentaphyllum and tricolorum, is from cuttings, in the autumn, winter, or at any season, when the plant shows a tendency to decay; take the tips of each shoot, about three or four joints from the point and put them in sand and leaf mould in equal proportions, mixed well together; if in the winter, place them in the greenhouse covering them with a bell-glass, but if in the spring or summer, in a hot frame, they will strike in a few days, and make fine plants before autumn.

P. S. I am trying an experiment with Tropæolum tuberosum, which, when accomplished, I shall feel a pleasure in forwarding to you, perhaps it may be of use to the readers of the Floricultural Cabinet.

J. FYFFE

(We shall be highly obliged by the favour.—CONDUCTOR.)

ARTICLE. III.

A DESCRIPTIVE LIST OF CAMELLIAS.

BY CAMELLIA.

(Continued from page 30.)

- Thompsonia superba*, double rose, very good.
Triumphans alba, double, white, small pink stripe, fine.
Serratifolia, double, fine dark red.
Pelegriana, double white, dark red spot or stripe, extra fine.
Acutifolia, double red.
Foordii, double light red, fine form.
Carnescens, single, pale red.
Revesii, double, red, small foliage.
Emma, double, pale white, large and fine.
Celestina, double, light rose, fine form, extra
Flavescens minor, double, buff or blush, good.
Egertonia, double, dark red, Warratah form.
Campanulata, double, dark red, very good.
Folia variegata, single striped leaved.
Grunellii, double, white, fine, large, extra good.
Atroviolacca Serni, double, fine red.
Linnea superba, double, dark red, very fine.
Nivea, double white, good.
Parksii, double, red, white stripes, good.
Wiemeriana Serni, double, flesh colour.
Rugosissima, single, red, large and fine
Lady Henrietta, double, rose, mottled.
Alnutii superba, double, light red, good.
Variegata major, double white, red stripes, very good.
Dianthiflora lineata, double, white, rose stripes.
Lombardii, double, red, white spots or stripes, extra fine.
Gloriosa, double, light red.
Gloriosa alba, fine white, good.
Eclipse rosea Presses, double, blush, red stripes, fine.
Victoria Anserpersis, double red, white centre, fine.
Lady Grafton, double, light red, good.
Atrococcinea, double, dark red, white centre, very fine.
Princeps, double, fine red.
Rueckrii, double dark red, good.

Carminca, double, carmine, fine
Crassinervis Serni, double, light red
Eliza, double, fine white, very good.
White Marratah, Knight's double white.
Lindleyii, double, light rose, good.
Masterii, double, red.
Pictorum rosea, double fine rose, good.
Rubro pleno major, double, red, large and good.
Speciosa rosea, double, fine rose, good.
Helvola, double, red.
Credoca, double, fine red, white spot or stripe, fine.
Thompsonii, double dark red, good.
Elcata Cunninghamis, double, red, very good.
Grandiflora alba, double, large white, good.
Amanda, double, fine red, large flower.
Rosca Denholuis. double, light rose.

(To be continued.)

ARTICLE IV.

ON WINTERING THE CARNATION.

BY AN OLD FLORIST.

As the health and vigour of the Carnation depend greatly upon the method in which it is treated during the winter months, if the following method which I pursue is worthy of a place in your Cabinet, it is at your service. For several years I tried different methods of treatment, and I will here mention one or two of my first attempts to shew how much may be gained by persevering to attain any object you may have in view. After I had potted my layers and they had taken root, I prepared a bed which I considered suitable for my purpose, the sides and ends of which I boarded from eight to ten inches high; at the bottom of this bed I put cinder or rough ashes, filled even with sifted ashes; into this bed I plunged my pots, and made an arch of hoops over them covered with mats to protect them from the inclemency of the weather, during the frosts of winter. The mats were joined together with a pole, sown to the ends of the mats on each side to enable me to roll up the covering which rested on the top of the arch, when the weather was fine, but during severe weather they

were constantly kept down, and always during the winter nights. I found my plants with this treatment, do very well till some time after Christmas, when we had a long continuance of rain, snow, and frost, and all the care I took by supplying extra mats, I could not help the plants being constantly damp, both in grass and roots, they soon began to shew a sickly appearance, the hearts becoming a pale green, and eventually a great many dying altogether, those that survived becoming very weakly, and the flowers of course very diminutive.

After the failure in my last attempt I thought I would try the method of a friend of mine who was supposed to be a Carnation grower of great eminence, his plan was in a great measure similar to the last, with the exception of his being more careful to exclude the external air during severe frosts, and used raised frames. Although the plants were certainly more healthy by following this method of treatment, yet they did not produce such fine flowers as I had anticipated, perhaps it was only the mild winter that gave them the superiority over the others. After having tried various experiments repeatedly for several years, altering my mode of treatment each year, I found that the Carnation was a very hardy plant, and would, if placed in a southern aspect, stand in the open border during the severest winters in this climate; it is a plant of all others, that delights in a free, dry, and brisk circulation of air.

Being thus convinced of its perfect hardy nature, and seeing the bad effects resulting from nursing and confinement, having observed that when the plants were placed in an airy situation they throve much better than when they were confined, I erected a glazed roof about eight feet in width and between fifteen and and twenty in length, just as it suited my convenience; this roof I had supported with uprights, about nine feet high in the front, and seven at the back, perfectly open on all sides, so that a free current of air might pass through it; the front or higher part faces towards the south; from the back uprights, about four feet from the ground, I caused to be made a series of shelves, wide enough to hold two pots, and graduate them to about three feet high, the lower shelf being as wide as convenient, by this means I have a complete command of my plants.

The layers, when taken off, I frame for a week or ten days closely, or until they are well-rooted, and appear healthy, when I take them out and stage them, by this mode of treatment they

are exposed to all weather, have a free circulation of air, and at the same time they are protected from rain or snow, and what is of more consequence, they are above the influence of the damps and dews which greatly injures them when nearer to the earth. By thus treating my plants, they are never affected by any cankered spots on the leaves, and always preserve a beautiful healthy green appearance.

When the weather is mild, during the winter, I frequently syringe them, or water with a fine rose in the morning, if necessary, but if the winter should be very severe, and frost and snow prevail for a length of time, I always protect them by nailing mats or canvas to the uprights all round the stage, but as soon the weather becomes more genial, it is immediately removed, so that the plants may have the free circulation of the air as soon as possible. If snow or rain is suffered to fall upon them, and afterwards becomes frozen, seriously injures them, and should, on that account, be carefully guarded against. I found by this method the time saved is immense, there is no lifting up and down of lights, no closing or unclosing of frames, no stooping or trouble in the regulation of the plants, as they are easily removed to any situation in which I choose to place them.

This covering answers two essential purposes, that of wintering and also blooming under, being a great protection to the flowers when the weather is wet. It is for this purpose that it has the elevation stated, but others may find a variation requisite, but that of course has nothing to do with the plan which I consider to be the best mode for wintering this beautiful flower. If the reader of this article be a cultivator or amateur, by following this method of treatment, he will be fully compensated for the trouble and expense he might have been at, by always having a fine bloom of that most beautiful flower.

AN OLD FLORIST.

ARTICLE V.

OBSERVATIONS ON THE WEEVIL (AETHIONOMUS POMORUM).

BY R. T. W. T.

The cause of blight has been frequently ascribed to the prevalence of certain winds, whereas naturalists have traced all the mischief arising therefrom to the attacks of various kinds of in-

sects. The following account in the *Entomological Magazine*, of the Weevil, which infests apple trees, is so graphic, that I cannot resist transcribing it for the edification and amusement of the numerous readers of your periodical.

“ By carefully examining the bark of an apple-tree in the winter, you will occasionally find a pretty little beetle in the cracks, which, immediately on being touched, shams dead, and drops on the ground, where you will not, without great difficulty discover it on account of its great similarity of colour; you must therefore hunt till you find another. This time as soon as you see him, place your hand below him, then touch him lightly with a little bit of stick, and he will drop into your open hand; his own scheme for self-preservation will beat him. Now roll him into a quill or pill-box, and take him home. Place him in a sheet of writing paper, and you will soon see his shape. The head is furnished with a trunk, from which, on each side springs a feeler bent at right angles forward, so that the trunk altogether looks to be three-pronged like a trident. The thorax and wing cases are brown, beautifully mottled, and an oblique line on each, pointing towards the meeting of the wing cases, is much lighter coloured and gives the little beetle the appearance of having a letter V obscurely chalked on its back. Its size altogether is rather less than a hemp seed. With the first sun shiny day in March, these Weevils leave their winter-quarters, crawl up the trunk, and along the twigs, perch themselves so that they might receive the full benefit of the sun's rays, and plume themselves with their legs and feet all over, trident and all, just in the same manner that a cat washes her face with her paws; then they put out one leg at a time, cramped, no doubt, by the long confinement; they lift up their wing cases, and unfolds two large transparent wings, though twice as large as the wing-cases, were neatly folded up and hidden under them, and then launching themselves into the air, they go roving about the orchards and gardens, their little hearts in an ecstasy of freedom, and love, and happiness. It is not long before each find a suitable mate: no relations raise objections, and the nuptials are consummated without further delay. Now I will allow the gentleman Weevil to go his way in quest of a new lover, and other conquests; and in the meantime I will observe the conduct of the lady. By the time the female is ready for the important task of depositing her eggs, the spring has considerably advanced, the apple buds have burst, and the little

bunches of blossoms are readily to be distinguished. The Weevil soon finds them out, and selecting a blossom every way to her mind, commences her operations. The beak or trunk, before alluded to, is furnished at its extremity with short teeth, with these she gnaws a very minute hole in the calyx of the future blossom, and continues gnawing until her trunk is plunged in up to her eyes; the trunk is then withdrawn, and the hole examined with the nicest scrutiny, by the introduction of one of her feelers or outer prongs of her trident. If it seem to require any alteration, the trunk goes to work again, and again the feelers; at last, being fully satisfied that the work is well accomplished, she turns about, and standing with the extremity of her abdomen over the hole, thrusts in her long ovipositor, an instrument composed of a set of tubes, retractable one within the other, and then deposits a single egg (never more) in the very centre of the future flower. Another examination with her feelers now takes place, and when she is satisfied that all is right, away she flies to perform the same operation again and again, never tiring while she has an egg to lay. The bud continues to grow like the other buds, the little perforation becomes invisible. By and bye the egg bursts, and out comes a little white maggot, with neither legs nor wings, which, directly it is hatched begins to devour the young tender stamens, next to these the style is attacked, and eaten down to the fruit, the upper part of which is quickly consumed; the maggot is now fully fed, casts its skin, becomes a *crysallis*, and lies perfectly still. Up to this time the blossom has continued healthy, no trace of this enemy being to be discovered without, but when the neighbouring blossoms are expanding their petals to the genial breath of spring, those of the mutilated bud remain closed, and retain the arch ballon-like appearance of a bud about to burst. For a few days they preserve their lovely pink colour, and then by degrees fade to a dingy brown. In this state they remain, until the other apples are well knit, and then the damaged blossoms, by their decided contrast appear very conspicuous. On opening these brown or rather rust coloured blossoms, about the 10th or 15th of June, the *crysallis* will be found to have changed to a perfect beetle, similar to its parent above described, which, if it had been left to itself, would, in a few days, have eaten its way through the weather-beaten case of dried petals, and left its prison house, flying about to take its pleasure, until the chilly winds in autumn should

drive it to its winter habitation, under the bark ; and in the next spring the whole round of operations, through which we have watched its parent and itself, would be performed with the same unvarying unerring instinct. The cloudy misty east wind in which our gardeners see the blight, is the very weather of all least favourable to these Weevils. The fine, clear, sunny days of March are most favourable to them.

The tom-tits, sparrows, bullfinches, and other birds, which at this season of the year, are persecuted with relentless hostility by the farmer and gardener, live during these months solely on those Weevils and similar little insects ; and consequently are the only check on their increase which we possess ; so that in the first investigation of blight, we see how a little prejudice, superstition, and ignorance, tend to increase the injury they dread.

ARTICLE VI.

OBSERVATIONS ON STRIKING CUTTINGS IN PHIALS OF WATER.

BY AN OLD SUBSCRIBER.

I HAVE profited by a hint in one of your Numbers, about striking cutting in phials of water, plunged in a slight hot-bed, as follows : Melon, Cucumber, Pot-herbs, Geraniums. Myrtles, Antirrhinum, Chrysanthemum, Rose, Carnation, Pink, double Rocket flower stalks, double Furze slips, and a few others. The Dahlia I did not succeed with, the Furze I had tried various ways without success, before I found young top shoots of it slipped, do the best I could ; I shall make a more extended experiment on the method this next year, having, owing to illness, begun late in the season.

AN OLD SUBSCRIBER.

(We shall be glad of the results being communicated for insertion in the Cabinet.—COND.)

ARTICLE VII.

ON WATER AND WATERING PLANTS.

(Continued from page 136.)

BUT though a tract of land may happen not to contain matter proper for the constitution of some one particular kind of plant, yet it may for several others, and those much differing among

themselves. The vegetative particles are commixed and blended in the earth, with all the diversity and variety as well as all the uncertainty conceivable.

It is not possible to imagine how one uniform, homogeneous matter, having all its principles or organical parts of all the same substance, constitution, magnitude figure, and gravity, should ever constitute bodies so egregiously unlike, in all those respects, as vegetables of different kinds are; nay, even as the parts of the same vegetable; that one should carry a rosinary, another a milky, a second a yellow, a third a red juice in its veins; one afford a fragrant, another an offensive smell; one be sweet to the taste, another ascid, ascerb, austere, &c. that one should be nourishing, another poisonous; one purging, another astringent. In fact, that there should be that difference in them in their several constitutions, makes, properties and effects, and yet all arise from the very same sort of matter, would be very strange. And so note, that by the bye, this argument makes equally strong against those who suppose that mere water to be the matter out of which all bodies are formed.

The Cataputia in the glass F, received but very little increase only three grains and a half, all the time it stood, though two thousand five hundred and one grains of water had been spent upon it; he will not say the reason was, that water does not contain in it matter fit and proper for the nourishment of that peculiar and remarkable plant. No, it may be the water was not a proper medium for it to grow in; and we know that there are many plants that will not thrive in it.

(To be continued.)

EXTRACT.

ON THE AGAVE AMERICANA. GREAT AMERICAN ALOE.

The Aloe, that patriarch of the flowers, which "blooms once in a hundred years, and whose blossom then are developed with such rapidity, as to occasion an explosion resembling the firing of a cannon," is the theme of a tale that all have heard from their infancy, and to which many still give credence. In regard to the age in which the plants flower, that is extremely uncertain, and depends much upon the health of the individuals, and the degree of heat to which they have been exposed. Many live to a great age, and appear never to flower at all. In warm climates

twenty-five or thirty years, and probably a much shorter period is sufficient to bring them to perfection. The most remarkable instance on record of the early flowering of the American Aloe is that detailed by Mr. Hawkins in the Transactions of the Horticultural Society. This took place in the open ground, at Woodville, near Salcombe, Devonshire, the residence of the late James Cole, Esq., and considering that the plant is a native of South America, more especially within the tropics, it tells more the mildness of that part of England, than any circumstance that could be mentioned. The Aloe was planted in 1804, when it was only about six inches high, and then only two or three years old, within a few yards of the sea shore, yet elevated forty or fifty feet above the level of the water, where it had never any cover, shelter, manure, or cultivation. In 1812, it was more than five feet, and it grew during that summer, nearly the eighth of an inch daily. In 1820, it measured between ten and eleven feet in height, and covered a space, the diameter of which was sixteen feet; its leaves close to the stem, being nearly nine inches thick. In the beginning of June of that year, a stem made its appearance resembling a head of asparagus of an immense size, which, during six weeks grew at the rate of three inches a day, and then gradually diminished in progress; but not till it had attained the elevation of twenty-seven feet from the ground, which was at about the middle of September. The two lowest branches first showed flowers on the 3d September, and others came out in succession from the beginning of October to the end of November, when they all began to lose their colour and decay. There were upwards of forty flowering bunches, each with between three and four hundred flowers, making in all about sixteen thousand blossoms. As the stem grew, the leaves began to wither; and it appears the plant then died. Its age was twenty-one years: the height from the earth when in blossom, twenty-seven feet: the lateral branches, beginning at twelve feet from the ground, were in number forty-two, the lowest projecting two feet from the stem, and gradually diminishing to about a foot and nine inches in length at the top; the stalk where the side branches commenced was twenty inches round, or near seven inches in diameter, gradually tapering to the apex; the branches of flowers (or at least those next the bottom, were from a foot to fourteen inches in breadth.

Although various instances are on record of this plant having blossomed when confined in a pot or tub, and sheltered from the severity of our climate, yet the occurrence is so rare, as to excite a great deal of interest in the neighbourhood where such an event takes place; and I know not whether the variegated leaved variety, which is not uncommon in collections, blossoms with equal readiness; not having myself heard of the flowering of that kind, till that which is here represented threw up its flowering stem in the summer of 1836, at Aiken Head, the seat of Mrs. Gordon, where

the garden is under the management of Mr. Lambie. In this instance, the whole height of the flower-stalk, was only the half of that of Mr. Yates; and the blossoms were few indeed in comparison; yet they came to great perfection, and the plant made a very noble appearance

But the great size and strange form of this plant and the rarity of its blossoming in our collections, are not the only circumstances which recommend the American Aloe to attention. It yields a drink and a fibre of such extensive use in the New World, that it is reckoned, next to the maize and the potatoe, the most valuable of all products which Nature has lavished on the mountain population of equinoctial America; and no where, perhaps, is it held in greater esteem than Mexico, according to M. Humboldt, from whose "*Essai politique sur la Royaume de la Nouvelle Espagne*," I extract the following interesting particulars on this subject;

"Scarcely," says this distinguished Philosopher, "does there exist a tribe of savages in the world, who are not acquainted with the art of preparing some kind of vegetable drink. The wretched hordes which wander in the forests of Guiana, extract from the fruit of different palms, a beverage, which is as palatable as the European orgeat. The inhabitants of Easter Island, confined to a mass of barren springless rocks, mingle the expressed juice of the sugar cane with the briny water of the sea. Most civilized nations derive their drink from the same plants as afford them food, and whose roots and seeds contain the saccharine principle mingled with the farinaceous. In Southern and Eastern Asia this is rice; in Africa and Australia the roots of ferns, or of some arums; while in the north of Europe, the cerealia afford both bread and fermented liquors. Few are the instances of certain plants being cultivated solely with a view to extract beverages from them. Vineyards only exist west of the Indus; in the Old World, and in the golden age of Greece, the culture of the grape was confined to the countries lying between the Oxus and the Euphrates, in Asia Minor, and in Western Europe. In other parts of the world, nature certainly produces several species of wild vine; but no where has man attempted to collect them around them, and improve their quality by cultivation.

"The New Continent presents the instance of a people who derived their drinks not only from the farinaceous and sugary substance of maize, manioc, and bananas, or from the pulp of some species of mimosa, but who cultivated a plant of the pine apple family for the express purpose of converting its juice into spirituous liquor. In the vast plains in the interior of Mexico, there are large tracts of country where the eye discerns nothing but fields planted with the pites or maguay (*Agave Americana*). This plant, with its leathery and thorny leaves, and which, with the cactus opuntia, has become naturalized ever since the sixteenth century, throughout Southern Europe, in the Canary Islands, and on the African coasts, imparts a most peculiar character to the Mexican landscape. What can be more strongly contrasted than a field of yellow wheat, a plantation of the glaucous agave, and a grove of bananas, whose lustrous leaves always preserve their own tender and delicate hue of green! Thus does man, in all latitudes, by introducing and multiplying the various vegetable productions, modify at his pleasure the aspect of the country around him!

"In the Spanish colonies there are several sorts of maguay deserving of careful cultivation; some indeed, which, by the length of the stamens, the mode of division of the corolla, and form of the stigma, may, perhaps, belong to separate genera. The maguay or metl, which is grown in Mexico

consists of several varieties of the American aloe (*Agave Americana*), so common in gardens, which has yellow, fascicled, and straight flowers, with stamens twice as long as the divisions of the corolla. This must not be confounded with the *A. cubensis* of Jacquin, (*A. mexicana*, Lamarck, *A. odorata*, Persoon,) which has been erroneously supposed to be the metl or maguay of Mexico, but which is extensively grown in the Caraccas, where it is called maguay de cocuy.

"These plantations extend wherever the Aztèque language is spoken; they cease to the north of Salamanca, and are seen in the greatest luxuriance in the valley of Toluca and the plains of Cholula. There the agave plants are set in rows, distant fifteen decimetres from one another. The juice or sap, commonly called the honey, from its abundant sweetness, is only afforded when the flowering stem is about to appear, so that it is of great importance to the cultivator to ascertain precisely at this period. Its approach is indicated by the direction of the root-leaves, which the Indian always watches and examines with great attention, and which, formerly recurved, suddenly take an upward direction, and approximate as if to enclose the incipient flower stalk. The bunch of central leaves (*corazon*, the heart), next assumes a livelier green, and lengthens considerably: indications which the natives assure me hardly ever fail, and to which may be added several other less striking appearances in the general aspect of the plant. Daily does the cultivator examine his agave plantations, to watch those individuals which promise to bloom, and if he himself entertains any doubt, he appeals to the village aages, the old Indians, whose long experience gives them an unerring precision both of touch and eye.

"At eight years old or thereabouts the Mexican agave generally shows signs of inflorescence, and then the collection of the juice for making pulque begins. The bunch of central leaves, or *corozon*, is cut through, the incision gradually enlarged and covered by the side leaves, which are raised up and tied together at their tips. In this cleft the sap of those parts which were destined to form and nourish the gigantic flower stem is deposited, and this vegetable spring flows for two or three months, and may be tapped three times a day. The quantity of sap is enormous; and the more surprising, as the agave plantations are always made by choice on the most sterile soil, frequently on mere shelves of rock, scantily covered with vegetable earth. Each plant is calculated to yield about one hundred and fifty bottles; and at Pachuca, the value of a maguay, near flowering, is from twenty to twenty five francs, or five piastres. Still, as with the Vine, which may bear a greater or less quantity of grapes, the produce is apt to vary, and cannot be precisely calculated. Instances have, however, been known, of a parent bequeathing a plantation of maguay worth from seventy to eighty thousand piastres.

"The cultivation of the agave is attended with many real advantages above that of maize, wheat, or potatoes, as this sturdy harsh, and fleshy-leaved plant is uninjured by the occasional drought, frost, and excessive cold, which prevail in winter on the lofty Cordilleras of Mexico. It dies after having flowered, or when the central bunch of leaves is cut away, and then a number of suckers spring from the parent root, which increase the plant with extraordinary rapidity. One acre of ground will contain from twelve to thirteen hundred plants of maguay, of which it may be calculated that one in every thirteen or fourteen is always affording honey. Thus the proprietor who sets from thirty to forty thousand maguays is sure of leaving his family rich; though a man must possess patience and resolution to devote himself to cultivating what only becomes productive after an interval of fifteen years. In good soil, the agave blossoms at the end of five years; while in poor ground nothing can be expected under eighteen years; and any artificial means by which the flowering state is unnaturally accelerated, only destroy the plant prematurely, or materially lessen the amount of sap.

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"The honey, or juice, is of an agreeably bitter sweet flavour, and ferments readily from the sugar and mucilage with which it abounds, this process being hastened by the addition of some old and acid pulque. This vinous liquor resembles cider, but diffuses a disgusting smell of decayed meat, which Europeans have some difficulty in overcoming. Those, however who have accustomed themselves to the beverage, consider it as strengthening, stomachic, and particularly nutritive, recommending it, peculiarly, to persons of a meagre habit; and I have seen many whites, who, totally discontinuing water, beer, and wine, drink only the pulque, like so many Mexicans. The cause of the fetid smell of this liquor is variously attributed to the mode of preparation, the manure used for the soil, and the different materials in which the fermentation is carried on; and I only regret, that I was unable, for want of proper apparatus, to ascertain this curious point in vegetable chemistry. By distillation a most intoxicating liquor is obtained from pulque, which is called *Mexical*, or *aguardiente* (fire water) of *Maguay*. The plant which is preferred for this purpose, appeared to me smaller, and its foliage more glaucous than the common kind; but not having seen it in blossom, I cannot pronounce it to be specifically distinct.

"But not only is the *Agave* the Mexican vine, but it holds the place of Asiatic hemp and the Egyptian paper-reed (*Cyperus Papyrus*). The ancient manuscripts of this country consisted in hieroglyphics, often inscribed on a paper made of numerous layers of the *Agave* leaf, macerated in water, and glued together in the same manner as the pith of papyrus and the bark of the paper mulberry of the Pacific Isles. I brought away many ancient specimens of this fabric, some as thick as pasteboard, others as thin as fine India paper, which are the more interesting, as all the Mexican records hitherto discovered and still preserved at Rome and in Spain, are inscribed on the skins of the Mexican Deer. No thread is so much prized by physicians in Europe as that which is extracted from *agave* leaves, which are sometimes ten feet long, fifteen inches wide and eight thick, because it is not liable to twist; though the fibre of the New Zealand flax (*Phormium tenax*) excels it in tenacity. Twine, thread and rope are made of it; the latter is employed in the mines, and on the western coast, for rigging the ships. The common juice of the plant, or that which it yields when not about to blossom, is highly caustic, and useful for cleansing wounds; while the thorny points of the leaves, like those of the cactus, used to serve the Indians for nails and needles. The Mexican priests were accustomed to inflict wounds in that manner on their breasts and arms by way of expiation, as do the Buddhists in Hindoostan."

"Rarely as the American *aloe* blossoms in this part of Europe, a friend of mine, who lately visited the shores of the Mediterranean in the north of Spain, tells me that the brown withered flowering stems often stand there as tall, strong and thick as the masts of small vessels in a harbour, and are sometimes used for thatching. The height of this stalk varies from twenty to forty feet, and expands like a rich candelabrum, its arms clustered with golden yellow flowers. An extract from the foliage, when made into balls, will lather water like soap; and finally, the centre of the flower-stalk cut longitudinally is by no means a bad substitute for the European razor-strop owing to the minute particles of *silex* forming one of its constituents, in the same way as the Dutch rushes, or stems of the horsetail (*Equisetum*) are employed to polish ivory and brass. My friend William Christy, Esq. when writing from Guernsey last autumn (1837) says, "in this delightful climate, an *agave Americana* is just coming into flower, in the street of St. Pierre Port. It is twenty five years old, and already thirty feet high; and has always stood in the open air, summer and winter, without any protection."

[Bot Mag.

REVIEW.

The Fruit, Flower, and Kitchen Garden, &c. By P. NEILL, L. L. D., &c., &c.—We made insertion of this publication in our number for May, and promised further to notice it. The work contains many more remarks upon Fruits and Vegetables, than upon Flowers. The most interesting, connected with the latter, we present to our readers the following extract, on the Flower Garden.

THE cultivation of flowers, if not the most useful, is at least one of the most pleasing occupations of the horticulturist, and has generally shared largely in his attention. It is probable, that at first, flowers, as objects of curiosity, were confined to a few patches or borders in the garden, as is still the case in many old places; but in the progress of the art, and the diffusion of taste, separate departments were allotted to them under the name of Flower Gardens. After some general remarks on style and situation, we shall treat of the component parts of flower gardens, their various decorations, and of floriculture.

The designing of flower gardens unquestionably belongs to the fine arts, involving in it, the exercise of invention, taste, and foresight. Its principals are more vague and evanescent than those of any of the sister arts. The hand of the designer is not here guided by the imitation of Nature, for his work is wholly artificial in its arrangements and appliances; neither does utility come in, as in architecture, to supply a form and frame-work, which it is the artist's part to adorn. "As flower gardens," says Mr. Loudon, the best authority on this topic, "are objects of pleasure, the principal which must serve as a guide in laying them out, must be taste. Now, in flower gardens, as in other objects, there are different kinds of tastes; these embodied are called styles or characters; and the great art of the designer is, having fixed on a style, to follow it out unmixed with other styles, or with any deviation which would interfere with the kind of taste or impression which that style is calculated to produce. Style, therefore, is the leading principle in laying out flower gardens, as utility is in laying out the culinary garden. As objects of fancy and taste the styles of flower gardens are various. The modern style is a collection of irregular groups and masses, placed about the house as a medium, uniting it with the open lawn. The ancient geometric style, in place of irregular groups, employed symmetrical forms: in France, adding statues and fountains; in Holland, cut trees and grassy slopes; and in Italy, stone walls, walled terraces, and flights of steps. In some situations these characteristics of parterres may, with propriety, be added to, or used instead of the modern sort, especially in flat situations; such as are inclosed by high walls; in towns, or where the principal building or object is in a style of architecture which will not render these appendages incongruous. There are other characters of gardens, such as the Chinese, which are not widely different from the modern; the Indian, which consists chiefly of walks under shade, in squares of grass; the Turkish, which abounds in shady retreats, boudoirs of roses and aromatic herbs; and the Spanish, which is distinguished by trellis-work and fountains; but these gardens are not generally adapted to this climate, though, from contemplating and selecting what is beautiful or suitable in each, a style of decoration for the immediate vicinity of mansions, might be composed preferable to any thing now in use." It may, however, be remarked, that the

flower garden properly so called, has generally been too much governed by the laws of landscape gardening, and these often ill-understood, and misapplied. In the days of "clipped hedges and pleached alleys," the parterres and flower-beds were of a description the most grotesque and intricate imaginable. At a subsequent period, when the natural and the picturesque became the objects of imitation in the park, there appeared the most extravagant attempts at wildness in the garden. The result has been equally unfortunate. It is not meant that when there are merely a few patches of flowers by way of foreground to the lawn, they should not be subordinated to the principles which regulate the more distant and bolder scenery; but wherever there is a flower garden of considerable magnitude, and in a separate situation, we think it should be constructed on principles of its own. In such a spot, the great object must be to exhibit to advantage the graceful forms and glorious hues of flowering plants and shrubs; and it is but seldom that mere elegancies in the forms of compartments, and other trickeries of human invention, can bear any comparison with these natural beauties. To express the peculiar nature of garden scenery, as distinct from the picturesque in landscape, Mr. Loudon has invented the term *gardenesque*; and, whatever may be thought of the term itself, it is very desirable that the distinction should be preserved.

Two varieties of flower gardens have chiefly prevailed in Britain; one in which the ground is turf, and the pattern, so to speak, is composed of a variety of figures cut out of the turf, and planted with flowers and shrubs; and another, when the flower-beds are separated by gravel walks, without being dispersed with grass at all. The choice of one or other of these varieties ought greatly to depend upon the situation. When the flower garden is to be seen from the windows, or any other elevated point of view, from which the whole or the greater part of the design may be perceived at once, perhaps the former should be preferred. Where the surface is irregular, and the situation more remote, and especially where the beauty of flowers is the chief object of contemplation, the choice should probably fall on the latter. This variety, too, seems preferable, on the principle of contrast, where there are large lawns in the outer grounds, in order that kept (or smoothly mown) grass may not be found every where.

Respecting the situation of the flower garden, no very precise directions can be given, as it must be influenced by the size of the domain, the nature of the lawns, and the site of the mansion to which it is attached. Generally speaking, it should not be at any great distance from the house; and in places where there is no distant view of importance, it may be constructed under the windows. In retired scenes, it is delightful to step out of the drawing-room into compartments of flowers, in the vicinity of a greenhouse or conservatory. On the other hand, when the park is spacious, and the prospects extensive and picturesque, it is perhaps better that the flower garden should be at some distance, but not more than a quarter of a mile, out of sight of the house, and with an easy access in any sort of weather; an arrangement which would give an agreeable termination to a short walk, a desirable matter in most cases, for it has been often remarked that many parts of extensive grounds remain unvisited, because they afford no remarkable object to attract the attention.

The particular form of a flower garden is equally beyond the inculcation of specific rules. Indeed, it may be of any shape, and, except where the dimensions are extremely limited, the boundaries should not be continuously visible. The taste of the proprietor or designer, and the capabilities of the situation, must determine not only the external configuration, but also the arrangement of the interior parts. By judicious management, it may be made to pass through shrubbery, gradually assuming a more woodland character, and groups of trees, into the park on the one hand, and into the kitchen garden or orchard on the other.

(To be Continued.)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. CATLEYA PUMILA. *Dwarf.* [Bot. Mag. 3656.

ORCHIDÆ. GYNANDRIA, MONANDRIA,

This very pretty flowering species was received from John Allcard, Esq. from Esequibo, and it has bloomed in the collection of that gentleman last year. The plant is of a very dwarf habit, but the flowers are large in proportion, each being about three inches across. They are of a beautiful bluish purple colour.

2. DIANTHUS BISIGNANI. *Prince Bisignano's Tree Pink.* Bot. Reg. 99.

SILENACEÆ. DECANDRIA, TRIGYNIA.

A native of the coasts of Calabria and Sicily. It is common on rocks about Palermo. In this country it flourishes best if kept in the greenhouse. The plant being shrubby, and blooming freely, renders it peculiarly interesting. Each bloom is simple, about an inch and an half across, of a beautiful rosy pink colour. The plant would make a fine show in the open border during summer, and might be taken up in Autumn, and be preserved in winter in the greenhouse.

3. EPACRIS MICROPHYLLA. *Small leaved.* (Bot. Mag. 3658.

EPACRIDÆ. PENTANDRIA MONOGYNIA.

This very neat species is cultivated in the Edinburgh Botanical Garden, where it had been sent by Mr. Westland, Dorking, Surrey. The foliage is very minute, and resembles in habit *E. pulchella*. The plant is a profuse bloomer, and its numerous white flowers produce a pleasing effect,

4. FUNCKIA ALBO-MARGINATA. *Variegated.*

HEMEROCALLIDÆ. HEXANDRIA MONOGYNIA.

A native of Japan, probably brought from thence by Dr. Siebold. It has bloomed in the Glasgow Botanic Garden. The flowers are produced on a long raceme, twelve or fourteen upon each. Each flower is from three to four inches long, of a lilac purple colour, edged and streaked with white. *Eunckia*, so named in compliment to Mr. H. C. Funck, an apothecary of Gefreez in Germany.

5. GESNERA FACIALIS. *Gaping flowered.* (Bot. Mag. 3659.

GESNERIACÆ. DIDYNAMIA ANGIOSPERMIA.

A native of Brazil, which has bloomed in the stove at the Glasgow Botanic Garden. The flowers are produced numerously, each raceme having a dozen or more. The corolla is of a rich velvety scarlet outside. The lip white and thin and clouded with dark purple. It is a very handsome flowering species.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON RAISING THE *TROPEOLUM TRICOLORUM* FROM SEED, &c.—Having obtained a plant of the *Tropeolum Tricolorum* three years ago, I succeeded in blooming it to the admiration of all who saw it. The plant produced upwards of a dozen fine large seeds, very different from those I bought of the London seedsmen, which were small and withered, and which soon rotted in the soil, from which I never raised one plant, and as far as I can learn not one of my neighbours either; the seeds produced last season, alluded to, I sowed in fine sandy earth as soon as gathered, but to my great disappointment none of them have vegetated yet, but on examining the pot in which they were sown, I find the seeds very fresh. Now, Sir, if you or any of your numerous correspondents, would be so kind at the earliest opportunity, to let me know what mode of treatment these seeds want, as I am very anxious to increase my stock of so handsome a plant; you would do a service I have no doubt to the public generally, as it seems unknown to most of the propagators how to manage this most splendid of plants, and would also confer a very great favour on a young amateur.

Whitby, May, 24th, 1838.

ON PLANS OF FLOWER GARDENS, &c.—Having been a constant reader of your valuable little book from its commencement, and had some time ago seen some plans of Flower Gardens; I was led to hope that you would have continued to devote a page or so occasionally to the same purpose, I certainly think a plan, not of Flower Gardens only, but of small Pleasure Grounds, both public and private, would be very acceptable to a great portion of your subscribers.* (Query 2d on the striking *Geraniums*, &c.) I shall also esteem it a favour if you or any of your readers will inform me the best method of propagating the *Gryllima Laurifolia*, also the best time to strike cuttings of *Geraniums*, so as to have them in bloom in the month of May, and not drawn up weak; I struck nine last July, but they are now very much drawn up and rather unsightly as the leaves are decaying, although I have given them as much air as the weather would permit of, and have not had fire more than I was obliged to have; shall also be glad to have your opinion on Dr. Arnot's Stove for Heating Greenhouses, &c.; by condescending to answer the above in your Floricultural Cabinet as early as possible will greatly oblige

AN OLD SUBSCRIBER.

April 9th, 1838.

*[Plans are in the hands of our Engraver, and some will appear in successive Numbers.—CONDUCTOR.]

ON THE FEATHERED HYACINTH.—Will you or any of the numerous readers of the Cabinet, inform me the reason of the flower spikes of the feathered hyacinths dwindling and dying away before they expand. I have a great many which we call feathered hyacinths, and I plant the bulbs in rich light soil, they grow very strong and have strong flower stalks, but always dwindle away before they bloom. I have not had any to bloom for these last two years. I shall be glad to be informed through the medium of the Cabinet how to get them to bloom next year

HYACINTHUS.

ON LOAMY SOIL, &c.—Can you or any of your readers give me the definition of the word "Loam," does it mean merely the natural soil, varying in different localities, or does it always imply something clayey or soapy in the soil. No one hitherto can tell me what "Loam" is?

ECCLERS. NORW.

REMARKS.

ROYAL BERKS HORTICULTURAL SOCIETY;

Under the Illustrious Patronage of the Queen, the Queen Dowager, and the Duchess of Kent. At the annual general Meeting of this Society, held at the Town Hall, Wallingford, on Tuesday last: Edward Wells, Esq., Mayor, in the chair. The routine business of the day having been finished, the following distribution of prizes, &c. for the last year took place.

	£.	s.	d.
Prizes awarded to Members	73	8	6

COTTAGERS.

Prizes awarded for productions	14	6	6
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PREMIUMS FOR SUPERIOR GARDENS, VIZ:—

* The Duchess of Kent's Premium, to John Ford of St. Mary's, Wallington.	5	0	0
* W. S. Blackstone, Esq's Premium, to Robert Francis of St. Peter, Wallingford	2	2	0
* Extra Premium, by the Society, to Robert Francis of St. Leonard, Wallingford	2	2	0
* Miss Blackstone's Premium, to William Bartlett of St. Leonard, Wallingford	1	1	0
* John Marshall, Esq's. Premium, to John Hester of St. Peter's, Wallingford	1	1	0
E. H. Payne, Esq's. Premium, to George Durbridge of Dorchester	1	1	0
Minor Premiums by the Society amounting to	18	11	0
Premiums by Do., for superior management of Bees	2	0	0
Total	£120	13	0

Those marked thus (*) are renting allotments of W. S. Blackstone, Esq., M. P.

ON CLIANTHUS PUNICEUS.—“In the South of England this splendid Plant bears the winters with impunity, and in Devonshire and the Isle of Wight fully authorises the generic name given to it by the learned Solander, (Flower of Glory.) It was discovered by Sir Joseph Banks, in New Zealand, in the northern interior, in 1769, and again by the Missionaries in 1831. Mr. Curtis, who has raised numerous plants of it in his extensive nursery grounds at Cayen Wood, has been furnished with the following particulars respecting its introduction, &c., to this country, by Mr. Vaux, of Ryde, Isle of Wight, where the plant grows luxuriantly, and blossoms freely in the open air without the slightest protection. Mr. Richard Davis, Missionary Catechist, at New Zealand, sent the seed of *Clianthus puniceus* to the Rev. John Noble, Colman, Terrace, Ryde, who sowed it as soon as it was received, in the autumn of 1831. In the following spring Mr. Colman had several fine plants. In the autumn of 1832 some of the plants had indications of blossoms forming; and in the spring, or rather summer, of 1833, they flowered most beautifully, and produced seed vessels, one of which was forwarded to the London Horticultural Society, and engraved in the transactions of that valuable body. The propagation is extremely simple, cuttings strike readily under a hand glass in any soil, indeed when any bud of the growing plant touches the ground it will take root like a *Mimulus*, or like *Verbena Melindres*, the cuttings appear to succeed equally well, whether stripped off

or cut under a joint, and I have not found any difference as to ripened or green shoots. The native name of the plant, according to Mr. Cunningham, is Kowaingutu-Kaka, or Parrot's-bill, referring to the keel of the flower. Curtis's Bot. Mag.

ON *CLIANTHUS PUNICEUS*.—Having recently seen a splendid specimen of this plant in bloom in a greenhouse, planted against a trellis, attached to the back wall. I made some inquiries respecting its treatment in general. An intelligent gardener informed me that he formerly grew the plant in a pot, but requiring to be so often repotted, he resolved to plant it out into the border, the soil of which is a fresh turfy-loam, well enriched with old hot-bed dung: he turned out the plant last August when three feet high, and now (June 1st) it is eleven, and the lateral shoots having been spread, cover a space six feet broad. The whole plant appeared to be a mass of beauty beyond conception. The plant has occasionally been matured with liquid manure.

I was told that it was an error to grow the plant in sandy peat soil, as has been strongly recommended and generally practised, it keeps the plant weakly, and in proportion fewer of flowers, but the more vigorous, the more bloom. I was also told that the plant ought to be grown in the open bed in preference to a pot. The roots extend so rapidly and numerous as to require a vast extent to range in, if the plant is to arrive at its native beauty and grandeur.

The plant thrives well when trained in the open air against a south aspected wall, but it will not endure the cold of winter without protection, but it is easy of culture, and will satisfactorily bear taking up each autumn, and preserved in a cool greenhouse, through winter, and in the spring planted out as before. Cuttings strike very rapidly if planted in sand, and be placed in a gentle heat for a few weeks. FLORA.

LIST OF PLANTS SUITABLE FOR A FLOWER GARDEN, NOT LIABLE TO BE EATEN BY HARES.—The following list of plants contains those which, when bedded out at Dropmore, are seldom gnawed or bitten by hares or rabbits, except those which are distinguished in the list by an asterisk, which are sometimes gnawed when newly planted. Newly planted things are more liable to injury than such as have been in the ground some time,

<i>Tropaeolum majus flore pleno</i>	<i>Nierembergia calycina</i>
<i>Verbena Sabiniana</i>	<i>Salvia chamaedrifolia.</i>
.. <i>pulchella</i>	.. <i>fulgens</i>
.. <i>*venosa</i>	.. <i>Grahami</i>
.. <i>*chamaedrifolia</i>	<i>Senecio elegans</i>
.. <i>Melindris</i>	<i>Kaulfusia amelloides</i>
<i>Bouvardia triphylla</i>	<i>Mahernia pinnata</i>
<i>*Heliotropium sp.</i>	<i>Petunia nictaginiflora</i>
<i>Calceolaria salviolifolia</i>	.. <i>rosea</i>
.. <i>thyrsiflora</i>	.. <i>prænitens</i>
.. <i>rugosa</i>	.. <i>Phœnicia</i>
.. <i>angustifolia</i>	.. <i>blanda</i>
<i>Oenothera macrocarpa</i>	<i>Mimulus roseus</i>
<i>Pelargonium optabile</i>	<i>Isotoma axillaris</i>
.. <i>Daveyanum.</i>	<i>Alonsoa linearis</i>
.. <i>pavonicum</i>	.. <i>acutifolia</i>
.. <i>Black Prince</i>	<i>Cinreraria amelloides</i>
.. <i>Fairy Queen</i>	<i>Fuchsia globosa.</i>
.. <i>Scarlets in var.</i>	

From LOUDON'S GARDENER'S MAGAZINE, .

ON *LANTONA SELLOI*.—This very neat and handsome flowering plant has bloomed most profusely when grown in the open flower beds, that I am induced to send a few observations on the mode of treatment I pursued.

I procured a plant in April 1836, and kept it in a warm part of the greenhouse, it bloomed profusely from June to September; I found that cuttings struck as readily as the *Verbena melindris*, I therefore took off during autumn fifty cuttings, which I potted off in November into small pots, and and kept them in the greenhouse through winter. Early last May I planted them all out with balls entire, into a raised bed of rich loamy soil in my flower garden; not attending at first to tying up, the plants laid down on the ground, and in a few weeks I perceived the shoots had taken root similar to the roots of the *Verbena*. I allowed them to continue and spread, which they did in such a manner as to cover the soil entire, and the plants bloomed in July, August, and September delightfully, forming a fine contrast to the scarlet and white *Verbenas*. Its beautiful purple flowers making a showy appearance. The plant well deserves the attention of all who possess it. It may be procured very cheap. The plant is not capable to endure the open air in winter, so that a fresh supply of plants has to be raised, every summer or autumn in order to supply the following year.

CLERICUS.

ON SOME NEW PLANTS.

The Quarterly Review, No. 121, gives the following notices of plants which Mr. Moorcroft considered likely to prove valuable in this country if they could be introduced.—*Travels in Kathmir, Bockhara, &c.* By Messrs. Moorcroft, and Trebeck.

THE PRANGOS.—*Prangos Pabularia* of Lindley, *Asiatic Journal*, V. XIX. p. 798, *Silphium* of the antients, Royle's *Botany of the Himalay* p. 230. "One of the most valuable sources of fodder in Ladakh, and perhaps in any country; it varies in size according to age, from a single leaf, not more than an inch in circumference, to a cluster of flowers and leaves spreading to a circumference of from twelve to eighteen feet. The head of the *Prangos*, including leaves, flowers, stems and seeds, is converted into hay for winter fodder for goats, sheep and cows. Considering the value of this plant as forage, its growing in a poor sterile soil, in every variety of site, except actual swamps, and in a bleak cold climate, and its flourishing wholly in independence, without the care and industry of man, it would seem probable that it might be introduced with national advantage into many parts of Britain, and would convert her heaths and downs, and highlands, into store-houses for the supply of innumerable flocks."

"THE LONG-MA or sand grass, furnishes almost the whole of the winter food of the unstabled brood mares and colts of the rajah of Ladakh, of the keary or wild horse, of the yak, and of all the cattle which are left unhoused at that season."

THE PURIK, a small species of sheep, common in Ladakh, Mr. Moorcroft says, "It would be an invaluable appendage to the cottage of the British peasant, as it could be maintained at scarcely any cost. During the day in the summer months, it is pastured amongst the mountains, but at night and in the winter, it finds shelter in a walled yard, or under the roof of its master. In this state it seeks with incessant assiduity grass, straw, chaff, peelings of esculent vegetables, always attends the meals of the family, for morsels of flour cake, barley meal, &c. and will sometimes even nibble a bone."

Though a breed of these little animals might be attended with some expense and difficulty, could not the seeds of a *Prangos* and *Long-ma* be more easily procured by some of the numerous botanical collectors or speculators?

(The subject is well worth the attention of any of our readers who have correspondents in those countries. A small portion of seed of each would suffice to sow for the first season, so as to ascertain a satisfactory knowledge of its properties and suitability to this climate, &c. and to a more extended culture, if found worthy of it.—CONDUCTOR)

ON HYBRIDISING PLANTS.—The season for numerous plants blooming having arrived, I suggest to amateurs, nurserymen, and gardeners, the propriety of attending to artificial impregnation of all these kinds of flowers likely to become fertile. We are much indebted to the zeal and attention of a few persons whose efforts have been crowned with abundant success in furnishing our stoves, greenhouses, conservatories, and flower gardens with some of the most ornamental flowering plants; need I state the lilly, calceolarias, petunias, pansies, phloxes, salvias, fuchsias, verbenas, geraniums, rhododendrons, azaleas, &c. &c. A little attention in this process will undoubtedly be rewarded with more than ample compensation, and what is more interesting in plant culture than to have a number of seedling plants coming into bloom. The pleasing anxiety and gratification is extreme. A small pointed camel hair pencil is often needed in the operation, where the blossoms cannot be brought into contact.

May 26th

AN ARDENT ADMIRER AND CULTIVATOR.

REFERENCE TO PLATE.

EUPHORBIA FULGENS. Fulgens-flowered. This very strikingly singular and beautiful flowering species, is a native of Mexico, and requires to be grown in this country in the stove. The graceful habit and appearance of the plant even when not in bloom, in addition to its splendour, when loaded with its brilliant coloured flowers, render it a most charming plant, and it certainly merits a place in every collection of hothouse plants.

It grows very rapidly, so that a small plant obtained soon increases to an ornamental object. Cuttings inserted in sand, strike root very freely, and plants can be purchased at a very reasonable price. A compost of equal parts of sandy peat and rich loam, appear to suit the plant best. *E. splendens* is a very beautiful flowering species, but the present kind very far exceeds it in elegance and splendour.

PETUNIA MARGINATA PRASIMA. Mr. Luke's grass green-edged Petunia. The singularity and beauty of this very distinct variety is most striking. When the drawing was sent us, we were much struck with it, but far more so when we got plants of it in bloom. It was raised by Mr. Luke the very intelligent gardener to Earl Morely, who kindly presented it to us. The improvement that has been effected with the Petunia is certainly striking, we now possess twenty very distinct varieties, some of them very handsome. The fact that the plants are of very rapid growth, profuse in blooming, easy of increase, and their being so suitable to train over the surface of a bed at any desired height, or to train against a trellis, or to be kept as ornamental bushes, alike render them deserving a place in every flower garden or greenhouse. When once a variety is obtained, it is very easily kept by putting off a number of cuttings in a pot, during the end of summer, being thus kept through winter and potted off in spring. A bed of them can be most readily provided. A number of varieties grown together in a bed, produce a very pretty effect.

PETUNIA VITTATA. Striped flowered. Is another of the pretty varieties recently raised, and which we obtained.

FLORICULTURAL CALENDAR FOR JULY.

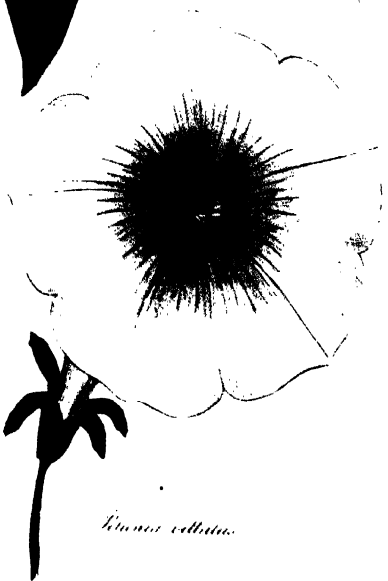
Take up the remaining tuberous root, such as *Anemone* and *Ranunculus*, finishing by the end of the first week; fill up their places and any vacancies that have occurred, with annuals from the reserve ground. Propagate herbaceous and other plants that have gone out of flower, by means of cuttings and slips; also roses and American shrubs, by laying, budding, or cuttings.



Ipomoea pes-caprae



Ipomoea marginata, var. rosea



Ipomoea cellata

THE
FLORICULTURAL CABINET,

AUGUST, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

REMARKS ON THE TREATMENT OF TROPÆOLUM TRICOLORUM

BY FLORA.

THE very graceful beauty of the above plant is such as amply to repay for any attention that can be bestowed upon it. Whether its neat and interesting foliage, or the striking gaudy flowers produced in such profusion be noticed, each have peculiarly attractive charms.

Very great difficulty, however, occurs in growing the plant successfully, which induces me to send the following remarks on the treatment which I have pursued, and which I have found to answer extremely well.

All plants having bulbous roots require a season of rest, this is requisite with the Tricolorum, the question with me was, when is the most suitable term for it; I concluded, when they appeared to cease pushing new shoots early in October, I then gradually withheld watering, and in the following month, I ceased to give any water at all. I retained the bulb in the dried soil, and kept it on a shelf in the greenhouse. Early in January I examined the bulb by removing a portion of soil from the side, and I perceived it was vegetating. I then took it up carefully and repotted it into a twenty-four sized pot, using the following compost,

one-third sandy peat, one-third well rotted leaf mould, and old hotbed dung, and the other part, a fresh yellow loam. I put two inches deep of drainage, viz. one of broken pots, and the other of moss.

I had the bulb placed high in the middle of the pot, and I replaced the plant in the greenhouse, and gave it water only when it was quite dry. This latter attention is very necessary, for the least excess of water rots the tender fibres, and consequently the foliage and stem dies. When, however, by any inattention, such a causality occurs, a friend of mine, who has long grown this plant, says, that the bulb should not have any more water, the surface stagnant soil to be removed, (not where the fibrous roots are), and a little dryish loam be substituted, the bulb ought then to be allowed to rest, just as if it was the usual season of its dormant state, at the end of the summer. Early in March, I put the pot in a gentle heat, in a hot bed frame for a fortnight, the bulb pushed a shoot, I then removed it to the greenhouse, where I carefully trained it to a circular wire frame, when the plant reached the height of six feet, and produced hundreds upon hundreds of its delightful blossoms. I am fully persuaded that the season of rest is by many persons prolonged too late in spring.

It is better to get the plant pushed by the end of March, and it can then be gradually encouraged by watering, &c. so as to become vigorous, and it should then be placed in a congenial situation in the greenhouse, where it is light and airy. When the bulb is kept dormant till April, as is generally done, a strong excitement is often had recourse to, by forcing the shoot up, and pushing it up afterwards very rapidly, in doing this, the roots are generally more tender, and the increased temperature renders an increase of water necessary; this often rots the fibres, and the plant either dies or becomes sickly. The greatest attention is required in the following particulars, viz. Have the bulb planted high, and excite the shoot up by placing the bulb a fortnight in gentle heat. Grow the plant in a light and airy greenhouse. Never water the soil till dry at surface, and dry it gradually for a season of rest; repot in the manner stated, and success is certain.

ARTICLE II.

ON THE CULTURE OF BOUVARDIA TRIPHYLLA.

BY MR. RICHARD DAY, ALVERTON GARDENS, BATH.

EARLY in April collect all the Bouvardias together from the place, where they have been kept through the dormant season, under the stage of the greenhouse. I turn them all out of their pots, and shake the soil completely from the roots; I thin off most of the large roots, yet retain as many of the fine fibrous ones as possible. Likewise at the same time, I cut down all the former year's shoots, retaining only two, three, or four eyes on each, according to the age and strength of the plants; I then plant them in pots, suitable to the size of the plants, taking great care never to overpot them, nor to cramp the roots by confinement. When potted, I water them to settle the earth about their roots, and place them in a cold frame, which is covered with mats at night, the lights being kept close during the night, and even in the day, unless the sun is very strong upon them, till they begin to grow; then give them portions of air, according to the day and their advance in growth. Subsequently I leave the lights off through the day, and lastly, do not put them on at night.

In about a week after they have been thus exposed, plant them finally out for the season, either in clumps by themselves, or distributed among other plants, when they are soon in fine bloom, and continue to flower till November, and are crowned with fine luxuriant clusters of splendid trumpet-like flowers.

As soon as frost is apprehended, I take up the plants with balls of earth attached to their roots, disturbing the fibres as little as possible, and place them carefully in pots that will admit of a little good mellow soil under the ball and around it.

When they are thus replaced in pots and watered so as to settle the mould, those which are in luxuriant bloom mix amongst the green house plants, where they make a splendid appearance till Christmas. When the plants begin to shed their leaves, and the flowers are nearly gone, I put them out of sight, under the stage as mentioned above, until April. This treatment I have continued with the same plants for many years; for the application of fresh soil, the trimming of the old roots, the great luxuriance gained by growing without confinement of their roots,

in congenial soil in summer, renovate the plants, which could not be done by any other means of culture.

Propagate the *Bouvardia*, by cuttings of the roots, which are managed as follows: fill some large pots with good fresh mellow loam, well blended with either thoroughly rotten dung or vegetable mould, and plant the roots all over the pot, beginning in a circle round the outside, opening the soil and planting them with the finger, continue to fill up one circle within another, till it is finished in the centre pot or pots, leaving no more of the roots visible above the surface than the top, when planted and watered, place them in a hothouse, where the temperature at night is kept at 70 degrees. As soon as the shoots get to between four and five inches high, I pot the plants singly into pots of a small size, and by degrees harden them after they have been established. When they have made some progress after this transplanting, I plant them out into a bed four feet wide, eight inches between the rows, and four inches in the row; where, if the soil be good, many of them will soon be in flower. They are then treated in the same manner, as directed for the older plants.

R. DAY.

ARTICLE III.

ON WATERING PLANTS.

BY CLERICUS.

THE present season of the year renders a good deal of watering necessary, and as the vigour and beauty of many plants is more or less the result of judicious or unjudicious watering. For several years I have used a good deal of liquid manure water with the greatest success, I am confident its advantages are not generally known, or it would be more generally used.

The mode of procedure I adopt is to water thrice with water in its natural state, and once with the manure water. This proportion is found to be congenial to the growth of all my greenhouse, stove, or half hardy plants, I have in pots; such as *Geraniums*, *Heaths*, *Salvias*, *Diosmas*, *Calceolarias*, *Cockscombs*, *Balsams*, *Justicias*, *Linums*, &c. &c. I find it most essential to

those kinds of plants which grow rapidly, and fill the pots full of roots ; a supply of the manure water, renders it unnecessary for a long time to repot, and where a larger pot would be unsightly, I can keep a plant vigorous all the season without it.

To give manure water only, I find fills the soil with too much nutriment, and closing it up, renders it unsuitable to the health of the plants. I find that my using manure water, the surface soil of the pots requires to be stirred up a little oftener, but the vigour and beauty of the plants, more than compensate for this attention.

I have a tank made at the lowest part of my melon ground into which the drainings from the hot beds run.

CLERICUS.

June 6th, 1838.

ARTICLE IV.

ON THE CULTURE OF *MANETTIA CORDATA* AND *M. GRANDIFLORA*.

BY LOUISA HARRIETT.

THE above named pretty flowering plants well merit a place in every greenhouse or conservatory, and are very fine accompaniments to the *Tropæolum tricolorum*, *pentaphyllum*, *Brachyceras*, &c. Having most successfully grown them during the last two summers, I forward for insertion in the Cabinet, my mode of treatment.

The compost I use is a mixture of sandy peat, and well enriched loam, in equal proportions, having the pots well drained. I take care to have the plant raised high in the centre of the pot, so that no excess of water can be retained to damage it. This is essential to its flourishing.

A small plant of each was potted off early in March, I placed a circular wire trellis to each, and trained them to the height of five feet, and each plant produced a vast profusion of their handsome scarlet blossoms. Early in June I removed them out of the twenty-four sized pots into twelves, in which they flourished the remainder of the year, continuing to bloom till November, and no plants in my collection equalled them in beauty.

Manettias are of easy culture striking most freely from cuttings

and grow rapidly. I purchased my plants at 2s. and 6d. each. I cut them down when I repotted them the second spring, being informed that plants so treated grew much more vigorous, than if all the tops were retained, as in that case the shoots are always weakly and produce few flowers.

L. HARRIETT.

ARTICLE V.

REMARKS ON THE HOLLY.

FRENCH naturalists have made the Holly the emblem of foresight, because, they say, that the foresight of Nature is admirably exemplified by this beautiful tree, which, when growing in its natural forest, protects itself by numerous leaves bristling with thorns, till it rises to about the height of ten feet, when the leaves cease to be thorny, and are perfectly smooth and even, because it has no longer any occasion to arm itself against any enemy who cannot reach higher; but we revere the Holly branch with its spiny and highly varnished foliage, which reflects its coral berries as an emblem that foretells the festival of Christmas, and the season when English hospitality shines in roast beef, turkeys, and the national pudding.

Tradition says that the first Christian church in Britain was built with boughs; and the disciples adopted the plan, as more likely to attract the notice of the people, because the heathen built their temples in that manner, probably to imitate the temples of Saturn, which were always under the oak.

The great feast of Saturn was held in December; and as the oaks in this country were then without leaves, the priests obliged the people to bring in boughs and sprigs of evergreens; and Christians on the 25th of the same month did the like; from whence originated the present custom of placing Holly and other evergreens in our churches and houses, to show the feast of Christmas is arrived.

This tree appears to have been formerly called Hulver, by which name it is still known in Norfolk, and Holme, in the southern counties; as appears by the name it has given to many places, where it grows naturally, as the Holmwood between Horscham and Dorking. Mr. Evelyn says, that the vale near his

house, in Surry, was anciently called Holmesdale. We presume, the name Holly is a corruption of the word holy, as Dr. Turner, our earliest writer on plants, calls it HOLY and HOLY-TREE; which appellation was given it, most probably, from its being used in holy places. It has a great variety of names in Germany, amongst which is *Christdorn*, in Danish it is also *Chirstorn*, and in Swedish *Christtorn*, amongst other appellations; from whence it appears, that it is considered a holy plant by certain classes in those countries.

The disciples of Zoroaster, believe, that the sun never shadows the Holly-tree. There are still some followers of this king of the magi to be found in the wilds of Persia, and some parts of India; who, when a child is born, throw in its face water which has been put in the bark of a Holly-tree.

Pliny tells us, that Tiburtus built the city of Tibur, near three Holly-trees, over which he had observed the flight of birds that the gods had fixed for its erection; and that the trees were standing in his own time, and must, therefore, have been upwards of one thousand two hundred years old. He also tells us, that there was a Holly-tree then growing near the Vatican, in Rome, on which was fixed a plate of brass, with an inscription engraven in Tuscan letters; that it was older than Rome itself, which must have been more than eight hundred years. This author notices a Holly-tree in Tusculum, the trunk of which measured thirty-five feet in circumference, and which sent out ten branches of such magnitude, that each might pass for a tree; he says, this single tree alone resembled a small wood.

The Holly grows to a considerable size, even as a timber tree, in this country, when permitted to stand. Cole tells us, in his "Paradise of Plants," that he knew a tree of this kind which grew in an orchard; and the owner, he says, "cut it down and caused it to be sawn into boards, and made himself a coffin thereof, and if I mistake not, left enough to make his wife one also. Both the parties were very corpulent; and, therefore, you may imagine the tree could not be small."

Bradley mentions that he has seen Holly-trees sixty feet high, at a place called Holly-walk, near Frensham, in Surry. Dr. Withering says, that on the north of the Wrekin, Shropshire, the Holly-trees, grow to a large size, and they are very common in the Chiltern division of Buckinghamshire. We have also ob-

served it growing abundantly in some parts of St. Leonard's forest in Sussex, particularly in the neighbourhood of Handcross. We presume that many noble trees of Holly would be seen in this country, but for the practice of cutting all the finest young plants to make coachmen's whips, thus leaving only the crooked branches or suckers to form shrubs.

The Holly, when it stands detached and is left to nature, forms one of the most beautiful evergreen trees that this or any other country produces; its pyramidal form, its immoveable foliage, its bright deep green colour, and brilliant vermillion berries, contrast happily with almost every tree and shrub which the forest or the grove affords.

In the shrubbery these trees have a good effect, when judiciously placed; and although we prefer the common Holly in general, we recommend the variegated kinds as great enliveners to dark evergreens, as the yew, cypress, &c. They should have the box or some dwarf shrub in front, and a dark back-ground, whilst the common variety should be mixed with gayer neighbours; and the pale tints of the larch, which tower above its head, harmonize as well with this tree as does the waving birch or tremulous asp.

The variety with yellow berries was found wild near Walder Castle, as also at Wiston, near Buers, in Suffolk; it is a very ornamental tree in the shrubbery, as its berries at a distance carry the appearance of blossoms from the month of October to March.

Our nurserymen now offer us nearly fifty varieties of this plant, all of which may be propagated by grafting on a stock of the common sort. The most curious variety is that known by the name of the Hedgehog Holly, from its leaves being defended in all directions by thorns; this kind grows naturally in Canada; and Mr. Miller considered it a distinct species, and says it continues its natural character when raised from seeds. It was first planted in the Bishop of London's Garden, at Fullham, in the time of Compton, by Mr. George London, who is supposed to have introduced it from France. This ingenious nurseryman says, in his "Retired Gardener," 1706. "We have great variety of Hollies in England, and have brought them to more perfection than they are in any other part of the world."

(To be continued.

ARTICLE VI.

ON THE CULTURE OF SCHIZANTHUS RETUSUS AND S. GRAHAMII.

IN the spring of last year I sowed seeds of the above *Schizanthus* in pots, and in May, I transplanted a number into my flower beds, they flourished and became very bushy, but did not at all throw up any flower stems. In October I took up the plants with all the soil adhering to each as I possibly could, and potted them into large pots, keeping each plant rather high in its pot. I did this, knowing they were likely to damp off, and being very bushy, I judged if the plant covered overclosely the top of the pot, the dampness from watering, would all be retained in the foliage, and certainly would cause it to rot. I placed the plants in a dry and airy part of the greenhouse during winter, and now, June 12th, they have pushed shoots a yard high, are still growing, and have hundreds of flowers upon each plant. One plant has eighteen erect principal stems, each furnished with laterals. Having been so successful, I have planted out some more from spring sown plants into the open border, for my next years' supply, where there is not the aid of a greenhouse, or even a pit frame to keep the plants in, during winter.

I am of opinion, if care be taken to pot high, and give none over the foliage in winter, they might be preserved in a dwelling room, having a tolerable aspected window for light. The beauty of the plant will amply repay for any unnecessary trouble.

Middlesex, June 13th, 1838,

FLORA.

ARTICLE VII.

REMARKS ON THE ROSE.

BY ROSA.

THE following very striking remarks on that lovely flower the Rose, I recently met with, and extract them for insertion in the Cabinet, the ardency with which the plant is now cultivated, and

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the season of blooming alike, will justify my requesting their immediate insertion.

The rose which is the emblem of beauty and the pride of Flora, reigns queen of the flowers in every part of the globe; and the bards of all nations have sung its praises. Yet what poet has been able, or language sufficient, to do justice to a plant that has been denominated the daughter of heaven, the glory of the spring, and the ornament of the earth.

As it is the most common of all that compose the garland of Flora, so it is the most delightful. Every country boasts of it, and every beholder admires it; poets have celebrated its charms without exhausting its eulogiums, for its allurements increase upon a familiarity, and every fresh view presents new beauties, and gives additional delight. Hence it renovates the imagination of the bard, and the very name of the flower gives harmony to his numbers, as its odours give sweetness to the air.

To paint this universal emblem of delicate splendor in its own hues, the pencil should be dipped in the tints of Aurora, when arising amidst her aerial glory. Human art can neither colour nor describe so fair a flower. Venus herself finds a rival in the rose, whose beauty is composed of all that is exquisite and graceful.

It has been made the symbol of sentiments as opposite as various. Piety seized it to decorate her temples, whilst Love expressed its tenderness by wreaths, and Jollity, revelled adorned with crowns of roses. Grief strews it on the tomb and luxury spreads it on the couch. It is mingled with our tears, and spread in our gayest walks; in epitaphs it expresses youthful modesty and chastity, whilst in the songs of the Bacchanalians their god is compared to this flower. The beauty of the morning is allegorically represented by this flower, and Aurora is depicted strewing roses before the chariot of Phæbus.

"When morning paints the orient skies,
Her fingers burn with roseate dyes."

It is thought to have given name to the Holy Land, where Solomon sung its praise, as Syria appears to be derived from Suri, a delicate species of rose, for which that beautiful country has always been famous; and hence called Suristan, the land of Roses.

Forster says, "the rose of Kashmire for its brilliancy and delicacy of odour has long been proverbial in the East."

"Who has not heard of the vale of Cashmere,
With its roses the brightest that earth ever gave."

MOORE.

The oriental poetry abounds in flowery allusions to this plant.

"You may place a hundred handfuls of fragrant herbs and flowers before the nightingale, yet he wishes not in his constant heart, for more than the sweet breath of his beloved rose."

"Oh! sooner shall the rose of May
Mistake her own sweet nightingale,
And to some meaner minstrel's lay
Open her bosom's glowing veil."

MOORE.

The Ghebers say, that when Abraham, their great prophet was thrown into the fire by the order of Nimrod, the flame turned instantly into "a bed of roses, where the child sweetly reposed."

According to the heathen mythology, Pagoda Siri one of the wives of Wistnou, was found in a rose.

The island of Rhodes owes its name to the prodigious quantity of roses with which it abounds.

Ludivico Verthema, who travelled into the east in the year 1503, observes, that Taessa was particularly celebrated for roses, and that he saw a great quantity of these flowers at Calicut, both red, white, and yellow; and Sir William Ousely tells us, in his work on Persia, that when he entered the flower garden belonging to the governor of a castle near Fassa, he was overwhelmed with roses. In Persia, wine and other liquors are brought to table with a rose in the bottle, instead of a stopple or cork.

Jackson says, that the roses of the Jinan Nile, or the garden of the Nile, attached to the emperor of Morocco's palace, are unequalled, and that mattresses are made of their petals for the men of rank to recline upon; and we read in Father Catrou's "Histoire de Mogol," that the celebrated princess Nourmahal caused an entire canal to be filled with rose water, upon which she took her pleasure with the Great Mogul.

The heat of the sun disengaging the water from the essential oil of the rose, this substance was remarked floating on the surface of the canal; and it was thus that the otto of roses was first discovered.

A perfumer in Paris who made otto of Roses for the court of Louis the Sixteenth, says, that it required four thousand pounds weight of rose leaves to produce seventeen ounces of the oil.

Of the birth of the rose, it is related in fable, that Flora having found the corpse of a favourite nymph, whose beauty of person was only surpassed by the purity of her heart and chastity of mind, resolved to raise a plant from the precious remains of this daughter of the dryads, for which purpose she begged the assistance of Venus and the Graces, as well as all the deities that preside over gardens, to assist in the transformation of the nymph into a flower, that was to be by them proclaimed queen of all the vegetable beauties. The ceremony was attended by the Zephyrs, who cleared the atmosphere, in order that Apollo might bless the new created progeny with his beams. Bacchus supplied rivers of nectar to nourish it, and Vertumnus poured his choicest perfumes over the plant. When the metamorphosis was complete, Pomona strewed her fruit over the young branches, which were then crowned by Flora with a diadem, that had been purposely prepared by the celestials to distinguish this queen of flowers.

Anacreon's birth of the rose stands thus translated by Moore :

“ Oh ! whence could such a plant have sprung ?
 Attend—for thus the tale is sung :
 When, humid from the silvery stream,
 Venus appear'd, in flushing hues,
 Mellow'd by Ocean's briny dews—
 When, in the starry courts above,
 The pregnant brain of mighty Jove
 Disclosed the nymph of azure glance—
 The nymph who shakes the martial lance .
 Then, then, in strange eventful hour,
 The earth produced an infant flower,
 Which sprung, with blushing tinctures drest,
 And wanton'd o'er its parent's breast.
 The gods beheld this brilliant birth,
 And hail'd the rose—the boon of earth !
 With nectar drops, a ruby tide,
 The sweetly orient buds they dyed,
 And bade them bloom, the flowers divine
 Of him who sheds the teeming vine :
 And bade them on the spangled thorn
 Expand their bosoms to the morn.”

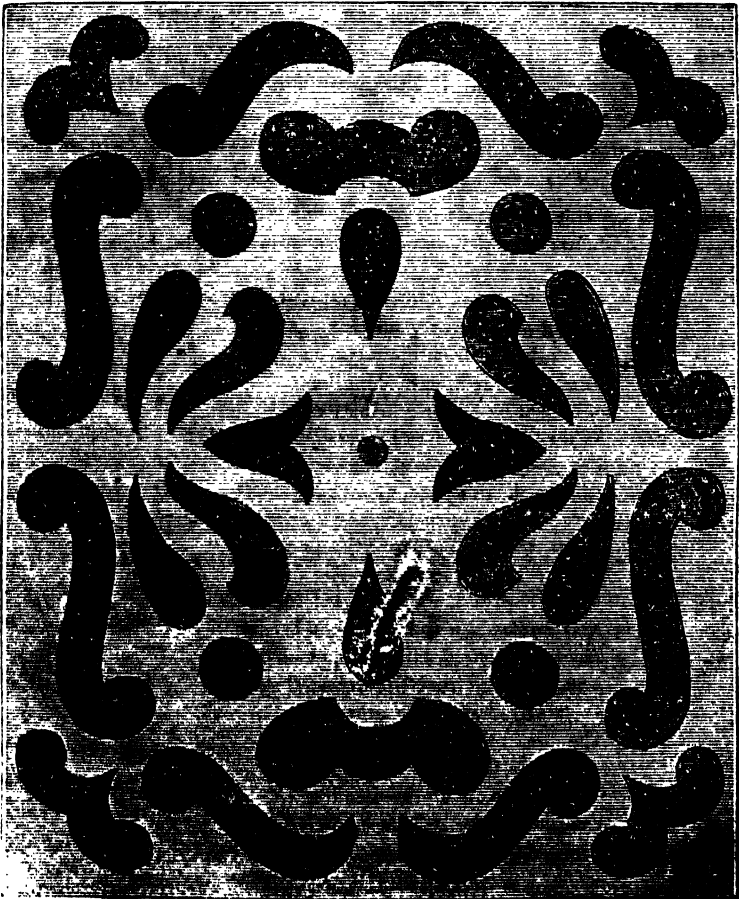
(To be continued.)

ARTICLE VIII.

PLANS OF A FLOWER GARDEN,

THE two following Plans of a Flower Garden, have been got up at a considerable expense, being of the very best description of wood-engraving, and executed by one of the first artists, their insertion, we hope, will be acceptable to our subscribers.

PLAN I.



We are aware that many of our readers feel much interest in the ornamental arrangement of plants, so as to perpetuate to the latest period a display of such flowers as are most calculated to prolong the interesting scenery of a Flower Garden. We shall feel much obliged, if some of our correspondents would kindly furnish us with a list of such plants as are best calculated for ornamenting of gardens on similar plans to the accompanying drawings.

PLAN II.





REVIEW.

(Continued from page 162.)

A north wall of moderate extent and moderate elevation, is often desirable, as affording space for ornamental climbers, and half acclimatized exotics, and as forming a *point d'appui* for the conservatory and other botanical structures. Such a wall may be surmounted with urns and other architectural ornaments, and screened at some little distance behind by trees. The other fences may be of wire-work, generally called *invisible*, or of wooden rails, or of holly hedges with rails.

Formerly the flower-beds were made either circular, straight, or in curves, and were turned into knots, scrolls, volutes, and other compartments; and this taste prevailed, perhaps, in some measure from a desire on the part of the contrivers, to compensate by their ingenuity for the paucity of the ornamental plants which they then cultivated. Now that the riches of Flora have poured into our gardens, a simpler taste has obtained. Of the figures in fashion at present in the lawn flower-garden, perhaps the kidney shape and its varieties occur too frequently. It is needless as well as impossible to specify the numerous configurations of flower-pots, for they abound in kaleidoscopic variety. Good taste will suggest that those only should be associated, which harmonize well together; and it is better to incur the hazard of an apparent monotony, than to excite wonder by incongruous combination. When the figures are separated by turf, it is necessary that the little lawns or glades should have a considerable degree of breadth, as nothing has a worse effect than over-crowding. A multitude of little figures should also be avoided, as they produce what Mr. Gilpin calls *spottiness*, and which, as he has correctly pointed out, is a greivous deformity. In this sort of flower garden, it is desirable that a gravel walk should skirt along at least one side of the principal figures; in our humid climate, the grass would otherwise render them inaccessible with comfort during a great part of the year. In those gardens from which turf is excluded, the compartments should be of a larger and more massive character. Narrow borders bounded by parallel straight lines and concentric curves, should be avoided. The centres of the figures should be occupied with tall-growing shrubs, and even with an occasional low evergreen tree, such as a yew or a holly. The walks arranged in long concave curves, may communicate here and there with one another. A dial, a few seats and arbours, with an urn or two or a vase, may be introduced with good effect. It is to be regretted that so few good specimens of this species of flower-garden have hitherto been executed in Britain.

Amongst the accompaniments of the flower-garden may be mentioned the rock-work. This consists of variously grouped masses of large stones, generally such as are remarkable for being figured by water-wearing, or for containing petrifications or impressions; and into the cavities between the stones, filled with earth, alpine, or trailing plants are inserted. These are numerous and may be endlessly diversified. Several species of *Helianthemum*, *Gentiana*, *Pentstemon*, and *Primula*; *Campanula pumilla*, blue and white varieties, *carpatica*, and *nitida*; *Saponaria ocymoides*, and *Adonis vernalis*, may be recommended. In proper situations, a small piece of water may be introduced for the culture of aquatic plants. One of the walks is sometimes arched over with wire-work, and covered with ornamental climbing shrubs, forming a delightful promenade in the glowing days of summer. A separate compartment, generally of some regular figure, is set apart for roses. A moist, or rather a shady border with bog earth, is devoted to that class of shrubs, commonly but not very accurately designated,

"American plants." In extensive places, a separate "American garden" is often formed in a locality which it not damp, has at least the command of water, occupying generally some warm corner of the park.

Some writers have advocated the formation of winter and spring gardens in separate localities: but we are not aware that their ideas have ever been embodied to any great extent. It is proposed that in the winter garden should be assembled all the hardy evergreen shrubs and plants, together with the few flowers that bloom during the winter months. The situation, it is recommended, should be well sheltered, and open only to the warm rays of the sun, which are peculiarly grateful in our cold brumal seasons. However attractive this scheme may be in theory, it seems doubtful whether it would be very successful in execution. Masses of evergreens have a sombre and monotonous effect, even in winter, unless occasionally broken and varied by deciduous trees. The contrast of their leafless neighbours relieves the intuseness of their gloom, and sets off their brilliancy. Though a winter garden, the very name of which is chilling, is perhaps not very desirable by itself, the object to be attained in it should be kept in view in the formation of the park or flower garden. We can easily suppose a particular section of the latter to contain a predominance of evergreens, and to possess the principal characters of a winter garden, without the formality of its name and purpose. In the endless variety of situations, it is not difficult to imagine a sloping bank, for instance, facing the sun, with a long walk skirting its base, the lower side of which might be adorned with a border or narrow paterre planted with arbutus and periwinkle, whilst the slope is covered with the higher evergreens, and the summit of the acclivity is crowned with groups of deciduous trees, interrupted by a few straggling firs, through which the wind, untried below, might sigh its melancholy music. Again, the spring garden, which need not be of very great extent, may take refuge in the vicinity of the green house or conservatory, with which it is naturally allied.

Soil.

A variety of soils is required in the flower-garden, to suit the very different kinds of plants that fall to be cultivated. To florists' flowers particular compounds are assigned, and these shall be mentioned when treating of the flowers themselves. American plants require a peaty earth, varying from boggy peat to almost pure sand. Alluvial peat, that is boggy earth which has been washed away and incorporated with white sand, it is to be preferred; peat, cut from its natural bed and only partially decomposed, is of no value at all, or it is positively prejudicial to plants. In collecting soil from the surface of the muir, it is proper to take no more than the upper turf or sod, with the peat adhering to it, and only from the driest parts of the muir, where, besides the common heath, ferns-grasses occur. Where this cannot be procured, a good substitute is found in vegetable mould, that is, decayed leaves swept from lawns or woods, and allowed to lie in heaps for a few years. For the general purposes of the flower-garden a light loamy soil is advantageous: and were the natural covering is thin, or requires making up, recourse should be had to the surface-earth of old pastures, which, especially when incumbent on trap rocks, is found to be excellent. It is expedient to have a large mass of this material in the compost yard. The turf, and the surface soil adhering to it, should be laid up in a rough state, in which way it is continually ameliorating, by the decomposition of the vegetable matters, and the action of the air.

(*To be Continued.*)

PART II.

LIST OF NEW AND RARE PLANTS,

Noticed since our last.

1. ANIGOZANTHUS FLAVIDA. *Yellow haired.* [Bot. Reg. 37.

HEMEDORACE. HEXANDRIA MONOGYNIA.

This plant was long ago introduced into this country from New Holland, but it is to be found only in a few collections. Recently it has been sent from the Swan River colony to R. Mangles, Esq. Sunning Hill, Berks. If cultivated in the open border during summer; it grows very vigorously and blooms freely, a rich loamy soil mixed with about one-fourth of sandy peat suit it best. When grown in a pot in the frame house, it requires plenty of room, to be placed near the glass, and have a free supply of water. The flowers are green in their early stage, changing to a yellowish green, when advanced. The outside of the flower is very hairy.

2. CENTAUREA DEPRESSA. *Prostrate.* [Bot. Mag. 3662.

COMPOSITÆ. SYNGENESIA FRUSTANEA.

The flowers of this species are very like the blue corn bottle of our own fields, but are of a much brighter colour. The plant is of a more humble growth, growing about nine inches high. When in bloom, the size of the flowers, the splendid colour and profusion of them upon a plant so small, has a very pretty effect, and highly ornamental to the flower garden. The present species is annual, a native of Persia, but succeeds well in the open border in this country.

3. EPIDENDRUM VIRIDI-PURPUREUM. *Purplish green flowered.*
(Bot. Mag. 3666.

Imported from Jamaica by Mr. Horsfall of Liverpool, and has bloomed in the Glasgow Botanic Garden. The flower stem rises to about half a yard high, and produces a drooping dense raceme of flowers, each about three quarters of an inch across. The sepals are of a pale green tinged with brown. The column green tinged with purple.

4. IPOMEA BONARIENSIS. *Buenos Ayres Ipomea.* [Bot. Reg. 3665.

CONVOLVULACEÆ. PENTANDRIA MONOGYNIA.

Mr. Tweedie observes that this species grows plentifully on ditch banks about Buenos Ayres, and seeds of it were sent by him to this country. The plant has a large tuberous root. It requires to be grown in the stove, where it produces flowers freely, very much resembling those of *I. insignis*; they are very handsome, of a pretty lilac colour, having the inside of the tubular portion of a dark purple. The plant merits a place in every stove as a twiner, growing to a great extent if required, and blooming profusely. Each flower is about two inches across.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE CULTURE OF PELARGONIUMS.—A few remarks on Pelargoniums are requested in the August number not later.

July 16th.

A YOUNG GENTLEMAN.

The query came after our original communications were printed off, we however give the practice of the most eminent growers around London. As soon as the old plants have done blooming, say, by the end of June at latest: cuttings are taken off, cutting each clean, horizontally, close under a joint, dressing off any leaves as far up as the cutting is to be inserted in a mixture of sand and loam, equal parts. These are struck on a slight hot-bed, from hot sun: in a month they strike root, and are then potted into 60's, in a compost of sandy loam and peat, or vegetable mould, then shading for a few days in a frame till struck afresh, when they are exposed to the open air. By the middle or end of August, they are repotted and the top of each plant is cut off, to cause a production of laterals which get pushed a few inches before winter, to furnish blooms next year. This latter attention is essential to have them bloom fine. By the early part of October the plants are all housed, and kept in rather a dry state through winter. In February following or early in March, the plants are repotted into a very rich loamy soil using a good degree of drainage, a free supply of water is given through the following season. When the young shoots have pushed, if too many, they are stemmed out in April, and a few left to bloom vigorously. Such plants are cut down in September, re-potted, &c., as stated is done to the above. We will however give an article more in detail in another number.—CONDUCTOR.

ON BENTHAMIA TRAGIFERA, (OR CORNUS CAPITATA).—An Old Subscriber to Harrison's Floricultural Cabinet, requests to be informed of the best mode to bring the Benthamia Tragifera plant to flower and fruit. The writer of this has three good sized plants of four or five years growth, and in a good healthy state, but have never flowered. For the last two winters they were kept in large pots and housed.

Bath, June 4th, 1838.

We hope our respected correspondent, who sent us the fruit in the first instance from Cornwall, will favor us with the mode of treatment which had been produced so as to have a plant fourteen or more feet high, and proportionably bushy. We had a plant at Downham, Norfolk, planted in the open ground last July, which remained out in a very exposed situation during the last winter; the branches and upper part of the stem were destroyed by the frost, but the lower part of the stem survived and is now pushing forth shoots. If the precaution of protecting the plant by matting, or even the stem wrapped up with straw bandage, &c., we are of opinion that only the lateral branches would have suffered.

If the plant was trained against a good aspected wall, it would unquestionably flourish there and bear fruit. It might then be readily protected in winter. From the statement made by a person who saw the original plant in Cornwall: scarcely any plant is more interesting, when it is seen loaded with fruit.—CONDUCTOR.

ON PLANTS SUITED TO A GRAVEL SOIL, AND WHAT KIND OF PLANTS ARE BEST ADAPTED FOR FLOURISHING UNDER THE SHADE OF LARGE TREES.—Your usual kind attention to Young Amateurs emboldens me to put a question to you, and I shall be very much obliged indeed if you will assist me by an answer.

What plants whether annual, biennial, or perennial will be best for me to plant in a very dry gravelly soil, which composes my garden. It does not seem to contain anything unfriendly to vegetation, as trees extend their roots and flourish in it. I particularly wish to make it ornamental by a variety of flowers during several months in the year, especially to train creepers up the front of my house. As I am asking questions you will perhaps allow me farther to enquire, what is the best method of filling up and ornamenting a garden under a growth of tall trees, and what are the plants, shrubs, or flowers, or foliage, native, or exotic, hardy, or half hardy, which may most be relied on for growth in such situations, whether damp or dry, and especially in a gravelly soil.

A CONSTANT SUBSCRIBER AND AMATEUR.

July, 4th, 1838.

REMARKS.

ON THE CULTURE OF CHORIZEMA OVATA.—That our collections may no longer want the exquisite richness of the blossoms of this plant, under good management, we shall proceed to lay down our method of cultivation, as practised at Chatsworth. Like many other New Holland plants, we find it a matter of difficulty to grow this species to a good natural size, and at the same time handsome.

The majority of the plants, from some cause, not clear to us, either draw up very weakly, or what is worse, scarcely progress at all. The following are the probable causes which work against its successful cultivation. First, being placed at too great a distance from the glass, which always tends to draw them up weakly, the atmosphere being too close and damp is the sure consequence of the want of a free circulation of air or want of light. Secondly, improper soil, careless potting, or incautious watering. By keeping these matters in view, and carefully refusing to practise either, we have succeeded in growing plants of this description to a degree of excellency far surpassing our expectations.

The soil in general recommended is an equal mixture of very sandy peat and loam; this composition, for plants like those we are now speaking of, does not fully accord with our experience; the soil used here will, therefore be found to differ. We select a quantity of peat, carefully avoiding such as does not contain a good deal of fibre, or that has not a considerable portion of white sand equally mixed with it, rejecting as entirely worthless all such as inclines to be stiff, or very sandy: to this is added not more than one-fourth of mellow sandy loam; the whole is then examined, and if the grains of sand are found not to touch, or nearly so, throughout the whole, so as to give it a greyish cast, what more sand is thought sufficient is thrown in and properly mixed up.

The soil is never sifted, this practise is discarded as taking out the most essential part, namely, the fibre; but after being well broken up with the back and edge of the spade, what lumps remains too large are reduced with

the hands. Any soil naturally retentive, or that inclines to become close, is always objectionable for these, and, in short, all hair-rooted plants. Plants on their first removal after striking are put into 60 sized pots in the above soil, being very particular in putting no less than two inches of good drainage (potsherds) at the bottom of each; they are afterwards removed to the propagating house, being first gently watered with a fine rose; here the atmosphere is congenial to them in this state, and will consequently cause the roots to push, and prepare them for a removal into an atmosphere more suited to their constitution, which should take place in about a week, as the young shoots will have taken hold of the new soil.

The next situation sought for them is a pit or frame (any aspect, where they can be placed near the glass, and be shaded from the hot sun; during fine weather air should be admitted freely, and the plants carefully though sufficiently watered every evening. They are finally placed in the greenhouse as near the glass as possible; but if avoidable never place them opposite the ventilator when the air is admitted, this will prove injurious to them; as the house will require to be freely ventilated; if the air is admitted from the roof, they cannot sustain any injury. The house should be shut up in the evening. As these plants suffer from over-potting, it is necessary here to caution against so dangerous a practice.

Potting is in general looked upon as of minor importance, but the truth is, a badly potted plant, however healthy when shifted, never thrives. It is instructive to turn out the balls of several recently potted plants, and observe where the soil is loose or in holes, how it affects their growth; where the soil is compact, and properly put about the roots, the plant will grow freely and root well; but, on the other hand, if the soil is put in loose, or left in holes, the plant never properly thrives, but languishes, and ultimately dies if allowed to remain in that state; it is therefore necessary to place the soil compactly and properly about the roots when potting, never forgetting to effectually drain every pot as before directed.

The propagation of these plants is a difficulty which every gardener acknowledges and experiences, but even this becomes comparatively easy when steadily and attentively followed up. The few following hints will be useful.

The cuttings should be taken off while the wood is young, and carefully prepared; take off the bottom leaves with a sharp knife, and make a clear cut just through the joint; the cutting pot should be drained and filled to within two inches of the top, with the soil before spoken of, on the top of this put a layer of clean white sand, into which plant the cuttings, making a little hole for their reception with a small prepared stick; when the pot is full, give them a steady watering with a fine rose; after which, place a clean glass over them. In this state they may be removed to the propagating house, where the temperature should not sink below sixty-five degrees, and plunged into a little saw-dust. They should be effectually shaded from the sun, which can easily be done by placing a sheet of coarse paper between it and the glass inside the houses not as usual on the roof outside. The glass should be wiped quite dry every morning, and the cuttings when necessary, carefully watered.

The object of filling the pot up to within two inches of the top with soil, is to enable the young roots, as soon as they are formed at the bottom of the cuttings, to take off at once into the soil, which greatly strengthens them, and prevents the check which would ensue when potted off, if allowed to form their roots wholly in the sand.

Seeds of many of the species ripen in abundance, and as they in general vegetate freely, plants may be readily increased from them. They may be sown in any light soil, carefully avoiding any among which dung is incorporated; placed in a gentle heat, securely shaded from the sun, and judiciously watered, they will come up well; and when four proper leaves are formed they may be potted off in the manner before directed for cuttings.



Stenobrycon oculata.



REFERENCE TO PLATE.

1. *STANHOPEA OCULATA*, Eyed Stanhopea. Gynandria, Monandria. Orchideæ.—This most extraordinary species of an eminently remarkably genera of plants was originally imported by Messrs. Loddiges from Brazil, but is also reported to be a native of Mexico, as specimens were previously gathered there by Count Karwinski, and are preserved in the Royal Herbarium of Munich. It is very readily cultivated by the same treatment afforded to other Orchideæ: natives of tropical climes. Practical details upon which our readers will find in several previous numbers of the *CABINET*; the form and marking presented to the eye by the flowers of this tribe of plants, are at once peculiarly attractive and striking, such is in a high degree conspicuously so with our present species, and must naturally awaken in the mind of every beholder the combined elegance and exquisite skill displayed in this one amongst the innumerable delightful works of our ever benevolent Creator.

2. *CHORIZEMA CORDATA*, Heart shaped Chorizema. Decandria, Monogynia, Papilionaceæ.—For the introduction of this new and beautiful species of Chorizema we are indebted to Robert Mangles, Esq., of Sunning Hill, Berks, who received it from the Swan River colony. It grows freely and is readily propagated by cuttings; it possesses fine foliage, of which other species are generally deficient, and blooms abundantly. It merits a place in every greenhouse or conservatory.

3. *MINULUS HARRISONIA*, Harrison's Monkey flower. Didynamia, Angiospermia, Scrophulariæ.—This variety was raised, we are informed, by Mr. Low, of the Clapton Nursery. It is hybrid between *M. Cardinalis*, and *M. Roseus*: it is by far the most beautiful of the tribe, and besides the beauty of the flowers, it has the fine musk scent of *M. Moschatus*. With us it grows near four feet high, making quite a vigorous branching plant, and blooms profusely. The plant does well either in the open border, or in a pot.

FLORICULTURAL CALENDAR FOR AUGUST.

PELARGONIUMS.—Those plants that have done blooming should now be cut down, this will induce them to push fresh shoots immediately; when the shoots have pushed two inches long, the old plants should be repotted, shaking off the old soil and replacing with new. This attention to have a supply of strong young shoots before winter, furnishes the vigorous blooming wood for the ensuing spring, and the plants are kept dwarf and bushy. When the young shoots push after being headed down, there are generally many more than necessary to be retained.

They should be thinned out when an inch long: the tops now cut off may be inserted in sandy loam, and struck if required.

GREENHOUSE.—All exotic trees and shrubs belonging to this department, that are in want of larger pots, or refreshment of new soil, should (if not performed last month) immediately be done. This is the proper time to propagate Aloes, Sedums, and all others of a succulent nature, by means of suckers or bottom offsets; when detached from the parent, they should be potted singly into small pots, using light dry compost, watering sparingly till they have taken root. In the first, or second week at farthest, inoculation may be performed on any kinds of the Citrus genus.

DAHLIAS.—Thin out the branches of those kinds which are introduced for show, and if it is desired to increase the stock of any new one, cuttings may be selected which will readily strike and form good sized pot-roots; water should be given copiously every evening, during dry weather; a strata of manure should be laid for three feet around the stem of each plant, which

will greatly assist in promoting a vigorous growth, and in the production of fine blooms during the ensuing month.

Earwigs and other insects begin now to infest the plants, and especial care should be taken to destroy them as much as possible before the plants get into bloom, which may be done by placing an inverted small garden pot, in which is placed a little moss; upon each stake, to which the earwigs will resort, and may be taken every morning.

AURICULAS.—Seedlings raised during spring should now be transplanted into pots for blooming.

CARNATIONS.—The blooms are now beginning to fade, and the operation of laying should be performed without delay; in doing this, take your seat astride a common form, get the pot before you, and steady the layers with your left hand, resting the back of your right hand upon the edge of the pot and holding the knife upwards between your two fore fingers and thumb; then, with a steady hand and correct eye, cut upwards quite through the middle of the second or third joint from the top; the cut may be extended a full quarter of an inch beyond the joints; if the joints are wide apart always take the second; remove the leaves that ensheath the joints, and shorten the nib just below them; be careful not to break off the layers in pegging them down, and cover the joints three quarters of an inch deep; remove them into the shade, water them with a fine rosed pot, and repeat it afterwards as often as necessary.

RANUNCULUSES.—roots should now be taken up and gradually and well dried in an airy room.

ROSES.—Budding should be finished as soon as possible.

CAMELLIAS.—any kinds required to bloom early, should now be removed into the greenhouse.

Mignonette to bloom during winter, should now be sown in pots.

FLOWER GARDEN.—Due care must be taken respecting watering any kinds of annual, biennial, or perennial plants that may be in pots. Propagate by means of slips, and parting the roots of any double-flowered and other desirable fibrous-rooted perennial plants done flowering. Likewise increase by offsets the different kinds of Saxifrage. Ariculas should be cleared of all dead leaves, and shifted into fresh pots; prick out of the seed bed, where it was omitted last month, Seedling Auriculas and Polyanthuses, in a shady situation: seeds may also be sown of both kinds in boxes or pans. Carnations may still be layered, also Sweet-williams if desired, the earlier in the month the better. Those which were layered four or five weeks ago, will now be sufficiently rooted to be taken away, or planted in beds or pots. Also plant out pink pipings, which were put in in June. Sow seeds of all kinds of bulbous rooted plants in pans or boxes, such as Spring Cyclamen, Anemonies, Ranunculuses, &c., &c. Those kind of bulbs wanted to increase should be taken up if the leaves be decayed, and the offsets taken off. Crocus's, Narcissus's Crown Imperial, and Lilies, should only be taken up every other year. In dry weather gather those flower seeds that are ripe of any desired kinds. Plant out such kinds of autumn flowering bulbs as yet remain unplanted. Heartsease towards the end of the month, should be propagated by slips, put into a shady border, and kept quite moist till they have taken root; these will form fine strong plants for blooming the spring following. Chrysanthemums should not have their shoots stopped to make them branch, and keep them bushy, later than the middle of this month, as, if done later, the lateral produce would be weak and the blossoms small.

Where the plant has numerous shoots, they should be thinned out to a few, to have the plants large and showy.

THE FLORICULTURAL CABINET,

SEPTEMBER, 1st, 1838.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON LOBELIAS FOR FORMING A BED IN THE FLOWER GARDEN.

BY CLERICUS.

THE *Lobelia Cardinalis* and *L. fulgens* have already been noticed in the Cabinet, and as they most deservedly merited, were strongly recommended as highly ornamental plants for the flower garden; the fine brilliant scarlet colour of the former, and the bright crimson of the latter, not being exceeded by any other flower. I am much pleased with the meritorious results of hybridising some of the species of *Lobelias*, and to find among the produce some peculiarly striking varieties. I procured all I could, (a list I annex below) early this spring, and have planted them in a bed in my flower garden, and they now form one of the most interesting and handsome ornaments the flower garden can boast of.

I planted the tallest kind, *L. cardinalis*, now three feet high, in the centre of a circular bed, a row of *L. fulgens* next, and then six rows of the mixtures in colour, consisting of one hundred and twenty-five plants, to complete the bed, with the exception of the outer row, which consists of *L. arguta* and *L. gracilis* alternately planted, these latter being prostrate kinds and of a pretty blue and white, make a delightful edging.

The soil I have planted them in is a good fresh loam, well en-
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riched with one year's old rotten dung from the cow yard, and a portion of sandy peat intermixed. In this compost, with a free supply of water, which is indispensable to their growing vigorously, I find them thrive amazingly. They now form a cone of brilliancy and beauty unrivalled, and which will continue to the end of the summer. I cannot too strongly recommend the culture of this lovely tribe to every reader of the Cabinet.

CLERICUS.

List of kinds which my bed contains, viz.

Lobelia densa, close flowered.

..... *purpurea*, purple.

..... *atrospurpurea*, dark purple.

..... *purpurea splendens*, very bright purple.

..... *serotina*, glittering blue.

..... *atrosanguinea*, deep blood-coloured.

..... *rosea*, rosy crimson.

..... *atro rosea*, deep rosy crimson.

..... *grandis*, dark.

..... *longifolia*, long-leaved lilac purple.

..... *violacea*, violet coloured.

..... *dentata*, purple crimson.

..... *coccinea*, scarlet.

..... *cælestis*, sky blue.

..... *millerii*, (not yet in bloom)

..... *propingua*, splendid scarlet.

..... *azurea*, deep blue.

..... *speciosissima*, showy.

..... *siphilitica alba*, white.

..... *siphilitica azurea*, deep blue, shaded.

..... *altoatouriensis*, shaded crimson.

..... *heterophylla*, various leaved, rich blue.

..... *cardinalis*, scarlet.

..... *fulgens*, crimson.

..... *speciosa*, pale purple.

(We join our correspondent in commendation of this lovely tribe of plants. Their peculiarly graceful mode of blooming, elegance of form in so many successive spikes of brilliant flowers, their long duration of flowering, easy mode of culture, and the

facility with which the kinds may be increased and kept, all combining to give them claims to be admitted into every flower garden, or as highly ornamental to the greenhouse or conservatory, in summer, when grown in pots. The kinds may be forwarded at a cheap rate, and when once obtained, an abundance may be kept in future. Each of the kinds are prolific in offsets, and such being taken off the old plants in autumn, and potted into small pots in a sandy soil, and be kept in a cool frame, cool room or greenhouse through winter, or taking up the old plants at the end of the blooming season entire, putting each into a large pot, and preserving as above stated, throughout winter, the offsets will be numerous, and strong, and may be potted and separated, &c. in March, and by being forwarded a little, will be the better for turning out the end of April or early in May. We prefer leaving the offsets to the mother plant till spring, for when taken off late in autumn, not having an opportunity of striking root before winter, often perish. In either case, the plants require very little water during the winter season.—CONDUCTOR.)

ARTICLE II.

ON LAYING CARNATIONS, &c.

BY FLORA.

I LIKE Mr. Slater's article on the Tulip, very well, the hints of Practical Florists are always valuable. Your correspondent Pomona has laid down minutely the operation of laying Carnations, but there is one part of his system which is decidedly bad, I mean the old, (and I had hoped the exploded) method of cutting through the joint and one half or three quarters of an inch above it; the reason he gives for this is, like the celebrated question of King Charles to the Royal Society, founded upon a position that does not exist. It assumes if the slit was not made, the shoot would grow as nothing of the kind had happened. Now this from seven years experience I know to be false; the layers root equally well without the slit, and the plants are much more hardy, being in fact the same as a piping. The incision should reach up to the joint, but not into it, and be cut off close to it, as should the other side when taken from the mother plant. I never saw the difference more fully exemplified than in the late unfavourable winter and spring. Of my own plants layered in the above manner I lost not above one in fifty, whilst of those I received from different

places which were layered in the slit manner, nearly one-fourth have been destroyed. Perhaps Pomona will say he has Mr. Hogg's authority for his method, if so, I acknowledge it to be true, and I consider Mr. Hogg the first authority in the kingdom, but I am convinced that if he was to try the other method, (so far as he from being the slave of a system) that he would have no hesitation in adopting it. I do not expect that old practitioners will generally adopt the plan, but I would have all young florists abhor the slit system as much as they abhor a wire worm or earwig.—From my Hole in the Wall.

HUMBLE BEE.

ARTICLE III.

ROSES PROPAGATED BY CUTTINGS OF THE ROOTS

BY CLERICUS.

HAVING been advised to try the experiment of raising Rose trees by taking cuttings off the roots, I did so, and found it to succeed admirably. The mode I adopted was as follows. The first week in March I took some of the long, thick, and fleshy looking roots of my English and French Roses, and cut them into pieces about three inches long. I then smoothened the surface of a border in front of a peach wall, upon this I laid the roots flat, at about six inches apart; when the roots were placed, I covered them with fine sifted soil half an inch deep, gently beating it to the cuttings; I then laid four inches more of loamy soil well enriched with rotten cow dung, a year old, giving the whole a good watering, and when dry, smoothened the surface over with the back of the spade. By the middle of May every cutting had sent one, and some two strong shoots, and on examination, I found the soil I had covered the cuttings with, to be filled with a mass of fine roots; at this time, July 5th, the shoots are more than a foot high.

I have anxiously watered the bed, being in a sunny situation I found it got dry, more especially so, having the bed raised upon the old surface of the border, it would have been better to have sunk it so as finally to have it even with the surrounding soil.

FLORA.

(We have practised the above mode of raising Moss Roses, and

similar border kinds, which have been found difficult to increase from cuttings of the wood or young shoots, and have never known it fail. The following February is the best time to take up the young plants, and remove them to beds for flowering, which they will do very freely if taken up with as many fibrous roots as possible. Well rotted cow dung is the best manure for the rose, being cooler than horse dung, &c. a portion of it laid over the roots of the plants early in March, and either just pointed in or covered over with a little fresh loam, which improves the vigour of the plants and increase of bloom.—CONDUCTOR.)

ARTICLE IV.

ON MESEMBRYANTHEMUMS GROWN IN THE OPEN BED OR ON ROCK WORK.

BY LAURA.

THIS very extensive family of plants, furnishes a considerable quantity of very great beauty. The neatness in form, splendour of colour, and the profusion of blossoms, alike contributing to give them interest. In no situation do they appear to greater advantage than on a rock work, which has an open aspect to the sun from nine o'clock in the morning to four in the afternoon, Plants turned out of pots towards the end of May in various situations, so as to intermix the colours to the greatest contrast, and where they will give most effect, selecting trailing species where such are required, to hang down the face of a piece of rock, and upright growing kinds to rise out of hollows. Selections suitable are readily obtained at a cheap rate of nurserymen, who will give the best kinds both with regard to habit and colour for the purpose for which they are required.

The soil which I have found them to flourish best in, is loam, well enriched with old dung, with near one-sixth of sand; this allows water to pass readily away from the roots, and is essential to their success, for when the soil is close, and becomes soddened around the roots, the plants always become sickly. A free supply of water is also necessary, when they are growing and blooming; plants turned out in spring will continue to bloom till frost sets in. An open aspect to the sun is indispensable to their blooming and the flowers expanding.

In addition to furnishing a rock work, I had a bed made in front

of a greenhouse, close to the building, I had the old soil dug out a foot deep, at the bottom, I laid four inches of broken potsherds in large pieces, and filled up the space with a compost as above stated; in this I planted out sixty plants, the latter kinds at the back, sloping to the walk, running parallel with the front of the bed, and they bloomed prodigiously from the first week in June till November, when I had them taken up and repotted. I also repotted those on the rock work, kept them in the greenhouse, and turned them out again in the spring. During the mild winters of 1835 and 1836, I tried to keep those on the rock work alive, but was unsuccessful.

Bristol, July 7th 1838.

LAURA.

ARTICLE V.

REMARKS ON THE HOLLY.

(Continued from page 176.)

"AMONGST the kinds of holly which we noticed in the *Jardin des Plantes* at Paris, we were most pleased with a variety, with a very small pointed leaf, named *Aquifolium serratum*, and a second with a very broad leaf, quite free from spines, which was called *Ilex balearica*.

Columella seems to have recommended the Holly to the Romans as a proper fence for gardens. In his tenth book he says,

"And let such grounds with walls or prickly hedge,
Thick set, surrounded be, and well secured;
Not pervious to the cattle, nor the thief."

Evelyn tells us that his garden at Say's Court was surrounded with an impregnable hedge of about four hundred feet in length, nine feet high, and five in diameter; "It mocks," says this worthy author, "the rudest assaults of the weather, beasts, or hedge-breakers," and it was almost the only thing belonging to his garden, that was not destroyed by the Czar of Muscovy. Mr. Evelyn lent his house to Peter the Great, in order that he might be near the dock-yard at Deptford, during his stay in England; and we are told that this imperial shipwright was so fond of being driven in a wheelbarrow over the box edgings and parterres of the author of the *Sylva*, that they were entirely destroyed; "which," says he,

I can show in my now ruined garden at Say's Court, thanks to the Oak.

Mr. Evelyn was evidently a good Christian, but he appears to have overlooked the passage in Scripture, which says,

“Put not your faith in princes.”

for it does not appear that the emperor of Russia made him the least recompence for the devastation he had committed, both in the garden and the mansion; and he was certainly an unrewarded slave to Charles the second.

Mr. Evelyn informs us that Lord Dacres had a park in Sussex, environed with a holly hedge, so as to keep in any game; and he adds, “I have seen hedges, or if you will, stout walls of holly twenty feet in height, kept upright, and the gilded sort budded low, and in two or three places one above another, shorn and fashioned into columns and pilasters, architectonically shaped, and at a due distance; than which, nothing can possibly be more pleasant, the berry adorning the intercolumniations with scarlet festoons and encarpa.”

At the time this author flourished, landscape gardening did not exist, and all the gardens in Europe were laid out on geometrical principles, therefore, these shorn hedges were well adapted to the formal and gloomy dignity of the gardens of that age of avenues, right angles and octagons; yet we are of opinion with Mr. London, that this style is not altogether to be condemned, it is well adapted to the palace at Versailles and of the Thuilleries, and all edifices which unite formality with splendour.

Few trees are better adapted for the lawn than the holly, as the colour either of the darkest or the most silvered, contrast equally well with the turf, and when

“The cherish'd fields
Put on their winter robe of purest white.”

It shines still more conspicuous; for the snows slip off the slippery leaves, as if dissolved by the fiery colour of its fruit, around which the feathered tribe crowd to claim the boon which nature has provided for them when other food is buried deep beneath the fleecy waters.

The holly which forms a verdant pavilion for the chirping tribe, protecting them from the inclemency of the stormy season, forms also a snare for their destruction; for the fowler obtains a viscid substance from the bark of this tree, which he prepares into bird-lime, and thus entangles his prey.

This tree which loves a cold loamy soil and a sheltered situation will thrive also where the south-west sea-blasts cut most other trees as if they were mown with a scythe, nor does it refuse to grow on gravel, chalk, or rocky land; and we have often seen it thrive upon brick earth, as well as upon dry hot sand and sterile heathy commons; thus accommodating itself to almost every soil and situation in the kingdom, particularly in very barren soils. The holly is valuable as well as ornamental. The timber is the whitest of all the hard woods; and therefore preferred by the turner and engraver to most others, as well as by the cabinet maker, when fashion permits the inlaying of coloured woods. It is often dyed black to imitate ebony; and it has long been in great demand at Tunbridge, in Kent, where it is manufactured into numerous fancy articles.

Deer feed upon the leaves in winter, and sheep browse upon it to their advantage.

Like the hawthorn, the holly sends forth its white blossoms in May, and its berries, like the thaws of the thorn, hang on the branches all the winter, and remain in the earth two years before they germinate, unless when they have passed through the stomach of fowls, when they vegetate the first year. We have, therefore, only to give them a similar fermentation by art, which nature gives them in the body of birds, to enable us to raise, young plants in one year instead of two. For this purpose we are recommended to take a bushel of bran, and to mix it with the seeds in a tub or earthen vessel, and wet it with soft water, and let it remain undisturbed for ten days when it will again ferment. It must be sprinkled occasionally with warm water to keep it moist, and in about thirty or forty days the heat of the moistened bran will put the berries into a state of vegetation fit for sowing in about a week after the fermentation has commenced.

March is the best season for sowing this seed, which may also be treated according to the direction given for raising hawthorns. September is the proper time for transplanting young hollies; but in cold and moist soils, they may be planted safely in the spring.

Mr. Evelyn says, he has raised hedges four feet high in four

years, from seedlings taken out of the woods. This should induce us to make more frequent trials of raising fences of this prickly plant; and particularly on hilly situations, where it affords shelter to the shepherd and his flock, against either excessive heat or piercing storms.

Old medical writers tell us, that the ripe berries are relaxing, and astringent when dried; but it is not our intention to recommend the robbing of the feathered tribe, and hurting our constitutions at the same time; nor would we willingly be deemed credulous in noticing the old customs of our forefathers, who trusted to a branch of holly for their defence against witchcraft; but this precaution has become unnecessary, since old ladies have lost their charming powers, and the spells of the youthful fair are too agreeable to be driven from us by a rod of holly.

The *Ilex Vomitoria*, commonly called the South Sea Tea, or Evergreen Cassine, is a native of West Florida, Carolina, and some of the warmer parts of Virginia, and principally found on the sea coast. This species of holly was cultivated as long back as 1700, but the severe winter of 1739 destroyed most of the plants; but it has since been raised from seeds, and is found to resist the cold of our winters without protection, except that of neighbouring shrubs. It rises to the height of ten or twelve feet, the flowers are produced in close whorls at the joints of the branches, near the footstalks of the leaves; they are of a white colour, and the fruit is a red berry, similar to the common holly. The tea made by an infusion of these leaves, is almost the only physic used by the natives of some parts of the new world.

At a certain time of the year these people come in droves from a distance of some hundred miles, to the coast for the leaves of this tree; when they make a fire on the ground, over which they place a vessel of water, and throw into it a large quantity of the leaves. They then seat themselves round the fire and take large draughts of the infusion until it operates as an emetic. In this manner they continue to physic themselves for two or three days, and when their stomachs are sufficiently cleansed, every one takes a bundle of the branches with him to his habitation.

ARTICLE VI.

REMARKS ON TROPOEELUM TUBEROSUM.

BY J. W. D.

A FIGURE of this interesting and pretty flowering plant, being recently given in the Cabinet, induces me to send the following remarks upon the plant which I cultivated during the last year.

In April 1837, I had a present of four tubers, which, as instructed, I planted in small pots, pushed them up in a hot bed frame, and then removed them into a warm greenhouse. The first week in June I turned them out of the pots entire, and planted them in a warm situation in a border in my flower garden, I had a very rich soil to grow them in. Around the plants were a number of rods, similar to what I use for sweet peas, these supported the plants from being broken by the wind, and kept them in good form as they extended, an addition of supports were given if required. I found the plant required a good supply of water. The last week in October I took up four plants, and to my astonishment, I collected half a peck of tubers in a very healthy state. I had been informed that the roots were fit to eat, and therefore had a portion boiled, and I found them to be of a soft pulpy nature, having the flavour of sea kale or asparagus, but slightly acrid, yet still very agreeable. The plant well deserves culture, both for its beauty as an ornamental flower, and for the tubers to eat.

Hackney, 1838.

J. W. D.

ARTICLE VII.

ON THE PANSEY.

BY ROSA.

As it has become a generally approved practice to have groups of flowers in varieties, as well as a bed of one colour, for the former I know of none equal to the Pansey, no other can furnish so many shades of colour as that beautiful plant. The flowers extend in colour beyond any other that I am acquainted with, and no other plant can equal it for duration of blooming. It continues from April to November. Its prolific flowering and humble growth too, very highly recommends it for beds, edging for a bed or border, or for a mixture amongst a general collection of flowers. The low price compared with some other ornamental plants, at which the various kinds are offered, affords fa-

cilities to obtain an extensive collection for a small amount of money; any other special recommendation of the pansy arises from its delightful fragrance.

During the past winter, the severity of the cold has made extensive ravages amongst the plants, and has instructed the growers with the fact, that some kinds are far more tender than others. It is very evident that plants raised from cuttings or slips, the previous summer, and are close and bushy, endure the severity of the winter the best. Plants that had been raised very early in spring, grown freely, and pushed long shoots during summer, or older plants with long shoots, have generally been cut off. To obviate this injury, it is advisable to raise a quantity of young plants each summer, or where old established plants are to remain, to have the long shoots cut in early in September, this induces a production of young and vigorous shoots, which I find will stand the severity of the winter uninjured. During winter I have observed that the frost, and worms in many cases, so operate upon the soil as to render it open and loose, it is advisable in such cases, to press close to the roots and stems, and to give an addition of surface soil.

ARTICLE VIII.

LIST OF PLANTS FOR FURNISHING BEDS IN A FLOWER GARDEN.

BY MR. THOMPSON, AUTHOR OF A PRACTICAL TREATISE ON THE CONSTRUCTION AND HEATING OF HORTICULTURAL ERECTIONS.

HAVING observed in the Floricultural Cabinet an application to any of your numerous subscribers for a list of plants best adapted for the ornamenting of flower gardens on plans similar to the engravings inserted in the Cabinet last month. Although these engravings are of a very superior description, yet in my opinion, there has been a great omission either in the artist or designer in not numbering the beds, so that any person being inclined to forward you a list of plants, suitable for that purpose, might do it more correctly, and more to the satisfaction of the reader, the numbers being a guide to the plants in each bed.

I, with much pleasure, forward you the following list of plants, which if you think worthy of a place in the Cabinet, is at your service. Great attention is necessary in the embellishment of a flower garden, to the contrasting of the tall and dwarf habited

plants in their proper situations, so as to vary as much as possible the colours of the flowers. Moreover I should advise that each of the principal beds should have standard perpetual roses introduced, and also that a few showy herbaceous plants, such as *Phlox paniculata*, *Phlox alba*, *Phlox reflexa*, *Phlox Wheelerii*, *Phlox Browni*, *Phlox tardiflora*, &c.

List I. consists of two kinds of plants grown in each bed.

- Anagallis Monelli* and *Lotus Jacobeus*.
- Anagallis grandiflora* and *Verbena Sabina*.
- Scarlet *Geraniums* and *Delphinium grandiflora*.
- Verbena melindris* and double white *Antirrhinium*
- Verbena Drummondii* and *Antirrhinium major*.
- Calceolaria vicosissima*, and double white Lillies.
- Fuchsia Thomsonia*, and *Delphinium Barlowii*.
- Lantana Sellowi* and *Verbena aubletia*.
- Verbena Tweediana* and *Lobelia, lutea*.
- Lobelia crinus* and *antirrhinium carryophylloides*.
- Crassula coccinea* and *Heliotropium peruvianum*.
- Verbena Lambertia* and *Mesembryanthemum spectabile*.
- Mesembryanthemum blandum* and *petunia intermedia*.
- Oenothera macrocarpa* and *Campanula garganica*.
- Double scarlet *Lychnis* and new white *Petunias*,
- Fuchsia globosa* and *Delphinium crinensis*.
- Oenothera Drummondii*, and *Flora cordata*.
- Petunia phyllicaulis*, and *Aster amelloides*.
- Petunia phænicea*, and *Hydrangeas*.
- Variegated leaved scarlet leaved *Geraniums* and *Delphinium grandiflora*.
- Oenothera missourensis* and *Mesembryanthemum floribundum*.
- Phlox Drummondii* and *Petunia gracilis*.
- Oenothera Drummondii* and *Campanula latifolia*.
- Calceolaria majori* and *calceolaria integrifolia*.
- Heliotropium peruvianum* and *Crassula coccinea*.
- Verbena melindris* and *Istoma axilaris*.
- Oenothera dispatosa* and *Beauverdia triphylla*.
- Fushsia conica* and *Oenothera speciosa*
- Brighton scarlet geranium and *Hydrangeas*.
- Bouverdia triphylla* and *Petunia macrocarpa*.
- Verbena incisa* and *Verbena Lambertia*.

List II. has only one species of plants grown in each bed.

Anagalis monelli	Lantana Sellowi
Anagalis grandiflora	Verbena arranana
Scarlet geraniums	Crassula coccinea
Delphinium grandiflora	Oenothera macrapa
Verbena Drummondii	Oenothera Drummondii
Double white Antirrhinium	Oenothera missouriensis
Verbena melindris	Calceolaria majori
Calceolaria viscosissima	Esholtzia crocea
Fuchsia Thomsonia	Heliotropium peruvianum
Verbena Tweediana	Petunia intermedia
Double scarlet Lychnis	Delphinium crinensis
Lobelia lutea	Phlox cordata
Fuchsia globosa	Aster amelloides
Petunia phyllacaulis	Hydrangeas
Antirrhinium major	Oenothera speciosa
Petunia phoenicea	Calceolaria integrifolia.

ARTICLE IX.

REMARKS ON THE ROSE.

Continued from page 180.

Fabulous authors also account for the delicious perfume of the rose, by telling us that Love, in a feast of Olympus, in the midst of the gaiety of a light and lively dance, overthrew, with a stroke of his wing, a cup of nectar, which precious liquor falling on the rose, embalmed it with that heavenly fragrance which it still retains.

Mythological writers also relate that Rhodante, queen of Corinth, to avoid the pursuit of her lovers, fled to the temple of Diana to conceal herself; but being besieged by lovers, and obliged to appear, she called on the people for assistance, who, on beholding her beauty, threw down the statue of Diana, and declared her to be the goddess of the temple; upon which Apollo changed her into a rose.

The first rose ever seen was said to have been given by the god of love to Harpocrates, the god of silence, to engage him not to divulge the amours of his mother Venus; and from hence the ancients made it a symbol of silence, and it became a custom to place a rose above their heads in their banquetting rooms, in order to banish restraint, as nothing there said would be repeated

elsewhere ; and from this practice originated the saying, " under the rose," when any thing was to be kept secret.

The Turks are great admirers of this beautiful flower, and Musulmen in general believe, that it first sprang from the perspiration of Mahomet, on which account they will not suffer a rose leaf to lie on the ground, or permit any one to tread upon this sacred flower.

In the luxurious days of the ancients, even the warriors crowned themselves with garlands of roses, during their principal repast ; and Pliny tells us, their delicate meats were either covered with the petals of these fragrant flowers, or sprinkled with its odorous oils. At a feast which Cleopatra gave to Anthony, the royal apartments were covered with rose leaves to a considerable depth.

The triumvir, when dying, begged of the captivating queen that she would scatter perfumes on his tomb, and cover it with roses.

In Turkey, a rose is sculptured on the monument of all ladies that die unmarried ; and in Poland they cover the coffins of children with roses, and when the funeral passes the streets, a number of these roses are thrown from the windows. Camden tells us, " There is a classical custom observed, time out of mind, at Oakley, in Surry, of planting a rose tree on the graves, especially of the young men and maidens who have lost their lovers ; so that this church-yard is full of them." It is the more remarkable, since it was used anciently both amongst the Greeks and Romans ; who were so very religious in it, that we find it often annexed as a codicil to their wills (as appears by an old inscription at Ravenna, and another at Milan), by which they ordered roses to be strewed and planted over their graves.

This ancient custom of decorating graves with flowers, the symbols of fleeting mortality, has almost passed from recollection in this country, and is rapidly disappearing in most parts of Wales ; but we read in the " Beauties of England," that Thomas Stevens, a poor and aged man, who lies buried in the church-yard of the village of Stokenchurch, in Oxfordshire, left a request that his oldest son would annually dress his grave with flowers on the recurrence of the wake of St. Peter's.

The Mexicans, says the Abbé Clavigero, have from time immemorial studied the cultivation of flowers and odorous plants which they employ in the worship of their gods ; and in the tem-

ple of the true God, the high priest was formerly crowned with roses. The Catholic church has still preserved the use of these flowers in its most sacred ceremonies, as it is always the rose that they strew before the holy sacrament in solemn processions.

There is now to be seen at Rome in the church of Saint Susan, an old Mosaic, which represents Charlemagne kneeling, receiving of St. Peter, a standard covered with roses. The custom of blessing the rose is still preserved at Rome, and the day is called *Dominica in rosa*. They make in that city artificial rose-trees of pure gold, which are blessed by the Pope on the first Sunday in Lent, while they sing *Lætera Jerusalema*, and which after mass, he carries in procession, and then sends it to sovereigns, or presents it to princes who visit his capital: and it was the custom until about these last forty years, for the prince who received this rose tree, to give a sum equal to five hundred pounds to the person who brought him this present from the pope; but the rose-tree itself was worth twice that sum.

Pope Julius the Second sent a consecrated rose of gold, dipped in chrisam, and perfumed with musk, to Archbishop Warham, to be presented to Henry the Eighth, at high mass, with the apostolical benediction. The king received the precious rose, and more precious benediction, with profound reference and excessive joy. But every body knows how soon the remembrance of this rose faded with this capricious monarch.

Mary Stuart, queen of Scots sent a magnificent rose-tree to Rosnard, the French poet, of the sixteenth century which was valued at two thousand crowns, with this inscription: *Rosnard, l'Apollon de la Source des Muses*.

Bayle relates an accident which happened at the baptism of Rosnard. In those days it was customary to bring large vases full of rose water, and baskets of flowers to christenings; and as the nurse was going to church with the infant bard, she let her flowers fall, and in turning to recover them, she touched the attendant who carried the vase of rose water, and spilt it on the child; and this says Bayle, was since regarded as a happy presage of the good odour that would some day scatter his poetry.

Painters represent Saint Dorothy holding a nosegay of roses, because it is told in her life that an angel gave her a bunch of roses; and a prodigy is related of Saint Louis the Ninth of France. It is pretended that a rose was seen to come out of his mouth after his death.

In the Abbey of Saint Croix, at Poitiers, they show a pillar that was raised to commemorate a pretended miracle, and where they tell you a rose-tree in full blossom sprung out of the grave of a young man after the day of his interment. It is truly shocking that the teachers of Christianity should countenance such absurd superstitions. We could enumerate many others coupled with the rose; but we are more anxious to give space for an account of the agreeable use to which this flower was put by Saint Medard, who about the year 530 instituted the most affecting prize piety has ever offered to virtue. It was a crown of roses for that villager's daughter who was the most modest, most obedient to her parents, and the most discreet. The first rose tree was his own sister, whom he crowned in the church of Salency.

We cannot pass over unnoticed the well-known story of the rose leaf, which shows how fond the eastern nations were of conveying their thoughts by hieroglyphics.

At Amadan there was a famous academy, the rules of which were, that the members of it should think much, write little, and speak as seldom as possible. Zeba, a learned doctor, celebrated all over the east for his great knowledge, hearing of a vacancy in this institution, hastened to the city in order to be elected. Unfortunately he arrived too late, for the place had already been filled by a candidate, who, like many in those times, owed his success more to his power than to his deserts. The president of the academy filled a vase so full of water that an additional drop would make it run over, by which the doctor was to understand that their society was too full to admit of another member.

The learned Zeb was retiring sorrowfully, when by chance he perceived a petal of a rose at his feet, which he seized with promptness, and placed so delicately on the top of the water, that it did not disturb it in the least. This ingenious allusion was received by the assembly with the greatest approbation, and the academicians testified by their unanimous applause, their consent to the reception of the illustrious Zeb as a member of their mute society.

(To be continued)

PART II.

LIST OF NEW AND RARE PLANTS.

Noticed since our last.

1. *FUNCKIA SIEBOLDIANA*. *Dr. Siebold's.* Bot. Mag. 3663.

HEMEROCALLIDÆ. HEXANDRIA MONOGYNIA.

This species was discovered in Japan by Dr. Siebold. It has bloomed in the Glasgow Botanic Garden flowering in the Greenhouse in July. The flower scape rises more than a foot high, bearing a drooping raceme of lily like flowers, white tinged with purple and green.

2. *GESNERA TUBEROSA*. *Tuberous-rooted.* [Bot. Mag. 3664.

GESNERIACEÆ. DIDYNAMIA GYMNOSPERMIA.

This species was sent to this country from the Berlin gardens by the name of *G. rupestris*, by mistake. The leaves are eight inches long, by six and a half broad. It blooms freely during autumn in the hothouse. The flowers rise above the surface of the tuber from two to three inches high. Each tuber producing twenty and upwards. The flower is rather more than an inch long, tubular, curved slightly. The limb of the corolla is of a deep scarlet, the inside of the tubular portion yellow, and of a yellowish red.

- NEMESIA FLORIBUNDA*. *Many flowered.* (Bot. Reg. 39.

SCROPHULARIACEÆ. DIDYNAMIA ANGIOSPERMIA. Synonym *N. AFFINIS*,

3. A pretty little annual, whose blossoms strongly resemble some of the *Linarias*, the plant grows about a foot high, branching, producing numerous flowers, each about half an inch across. White, with a tinge of yellow on the upper lip. It blooms in the open border from June to September.

- PHALGÉNOPSIS AMABILIS*. *The Indian Butterfly Plant.* (Bot. Reg. 34.

ORCHIDÆ. Synonym. EPIDENDRUM AMABILE.

4. It appears this singular species was first met with on the woody coast of Nasa Kambanga, by Dr. Blume. Rumph in noticing it says, "in Amboyna it grows on thick short trees, covered with moss, and it proceeds up such, coiling like a rope, and hangs down at the termination in entangled tufts.

It has recently bloomed in the fine collection of Messrs. Rollinson's, Tooting, for the first time it is supposed in this country. The form of the flower is very curious; the petals are of a pure white, broad, and of a leathery appearance. Labellum, white, streaked and lined with yellow and red. Each flower is near three inches across. The flower stem produces a panicle of many flowers. The plant grows freely, being fixed to a piece of wood, along with a little moss or turf attached, the whole being suspended in the orchideæ house. Whenever this mode of affixing orchideæ is adopted, the wood should be covered with rough bark, or be in a decaying state to enable the roots to fix themselves to it.

RHODODENDRON NUDIFLORUM; var. **SCINTILANS**. *Sparkling Rhododendron*. (Bot. Mag. 367.

ERICÆ. DECANDRIA MONOGYNIA.

5. This variety was raised at East of Carnarvon, High Clere. It is cultivated extensively, with others by Mr. Curtis, at Flazenwood. The flower is red, with the exception of the upper petal, which is of a fine orange. It is a beautiful variety.

SALVIA CANESCENS. *Horny Sage*. (Bot. Reg. 36.

LABIATÆ. DIANDRIA MONOGYNIA.

6. It is a native of the rocks of Caucasus. It is a hardy herbaceous plant, having the leaves covered with whitish wool, but the stems with longish hairs. The flowers are of a fine deep white purple, produced numerously on branching spikes, which rise to about two feet high. It is a pretty plant either for rock work or the flower border. It has bloomed in the garden of the London Horticultural Society.

TRITONIA FACCATA. *Painted Tritonia* (Bot. Reg. 35.

IRIDACEÆ. TRIANDRIA MONOGYNIA.

7. Cultivated in the collection of the Hon. and Rev. W. Herbert, Spafforth Mr. Wetherby, who received bulbs of it from the Cape of Good Hope, twenty-five years ago, but it did not bloom till last year, and that appears to have been the result of dung having been laid over the patches of bulbs in the open border. The flowers are produced upon a spike (twelve or more upon each) which is decurved from the part where the first flowers arise, from which circumstance, the flowers standing erect, show themselves advantageously, and produce an interesting appearance. The upper part of the labia is of a deep blood red, the lower part, of five recurved divisions, yellow streaked with brownish red.

CATILEYA MOSSIÆ. *Mrs. Moss's Superb Catileya*. (Bot. Mag. 3659.

GYNANDRIA MONANDRIA. ORCHIDÆÆ.

8. The flowers of this species are certainly the most magnificent of any orchideous plants yet bloomed in this country. The flower is eight inches across, and each petal, being four inches long and two broad, and the entire flower more than twenty inches in circumference. The colour and marking of the flower is very striking. The petals are of a beautiful rosy lilac. The inside of the tubular part of the labellum is yellow, the other portion of it rosy lilac, splendidly streaked and blotched with crimson scarlet, the lip spreading near three inches across. The flower is also peculiarly fragrant. The plant is a native of La Guayra, and was sent from thence in 1836 to the fine collection of Mrs. Moss, Otterspool, near Liverpool, where it has recently bloomed under the skilful management of Mr. James, the gardener. It ought to be in every collection of orchideæ, and no reasonable price ought to be objected to, in order to obtain it.

SALANUM CAMPANULATUM. *Bell Flowered*. (Bot. Mag. 3678

SOLANÆÆ. PENTANDRIA MONOGYNIA.

9. A native of New South Wales, and in this country has bloomed in the greenhouse of the Edinburgh Botanic garden. The stem is herbaceous. The flowers are produced in terminal racemes, the Corolla of a fine purplish blue, bell-shaped, an inch and a half across.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE RETARDING THE BLOOMING OF FLOWERS.—All gardeners are busy in making early flowers; is it possible to retard flowers, as to have those kinds which usually bloom in spring or early summer, to bloom in autumn? as for instance, the Pœony, Gladiolus, &c. Suppose the bulbs of the latter were taken up and not replanted till the middle of the spring, what would be the effect? If any reader of the Cabinet should have tried the experiment, I should be obliged for information as to the result, and if successful, mode of treatment pursued?

I wish that you would give me a list of those Geraniums (Pelargoniums) which may be said to blossom perpetually all the season (as the red does,) with the prices and where they may be got. Also, where is the most likely place to get these kinds that are good, but are become a little old and out of fashion. I think several of the best florists, or at least the most eminent do not consider it worth while to keep them, and it is therefore difficult to find them.

Will Geraniums, Pelargoniums, or Erodiums, produce hybrid flowers among themselves?

I wish you would give a list of those shrubs which has been introduced within the last few years, which are so hardy as to be useful in gardens and grounds. I love the open garden and its variety, and happy to inform you that the Araucaria is quite hardy, having stood through the last winter unprotected, although it was removed in the autumn.

HARDY.

(We have tried experiments of this kind with many flowers, and although we succeeded to bloom Ranunculuses, Anemonies Pœonies, Gladioluses, and Ixiases, of the tribe of early flowers, as late as August and September; they uniformly bloomed much weaker than at their proper season. Early blooming annuals can of course be made to bloom late by sowing seed accordingly. We tried several successive years to hybridize the Pelargoniums with the blue flowered Garden Geranium, but could not succeed. A white flowered Pelargonium was impregnated with *G. striata*, the pretty striped flower of the borders, and it was judged to have effected the purpose; a striped flowering Pelargonium was raised. But as sufficient care was not taken to prevent impregnation from some other Pelargoniums, it could not be positively determined as to the real fact. Perhaps some of our numerous readers may be able to give us additional information. If our correspondent requested a list of the sorts desired, with prices of any of the celebrated Pelargonium growers in his own neighbourhood (London) such would be cheerfully furnished; and such a person is most likely to know the habits of nearly every kind that has been celebrated for the last ten years, and would either furnish them, if desired, or give information where it was probable that they may be obtained. By raising plants at various seasons, or heading down in such a manner, repotting, &c. the flowering season may be prolonged, so as to have early and late, but the late blooming plants never can be caused to bloom as fine, as at their usual season in spring or early summer.—CONDUCTOR.)

ON NELUMBIUMS.—A few hints on the culture of these beautiful plants will be thankfully perused by your constant reader.

Canterbury July 13th, 1838.

J. P. K.

ON AMARYLLIS.—I would be glad to know from some of your readers, who cultivate the different species of *Amaryllis*, of the best mode of treatment. I have just had a collection of seventy-two kinds presented me, but not being properly acquainted with their culture, I feel very anxious to learn.

Should the bulbs be taken up and dried annually?

A YOUNG AMATEUR.

ON PACKING PLANTS.—A. M. D. would be considerably obliged by being furnished through the medium of the Cabinet with any practical information upon the best mode of packing and managing plants during a voyage. Mr. M. D. has many opportunities of receiving plants from his friends residing abroad, which he certainly should do, when he is acquainted with the best practical method of transmitting them. An early answer will greatly oblige.

Liverpool, June 28th, 1838.

ON CACTI.—I should feel much obliged if any of your correspondents would inform me through the medium of the Cabinet, respecting what I call a phenomena of nature. The cause, why a piece of one of the tribe of Cacti, which I observed a short time since in a garden, after being cut from the plant, and laying a fortnight on a shelf in the greenhouse, to produce as perfect a flower as when growing on the plant, the bud not being nearly matured when taken from the stem. Not having observed a thing similar before, and feeling an interest in botanical knowledge, induced me to send this, and should feel extremely obliged, by its insertion in the Cabinet.

ORBILOGIST.

REMARKS.

New and Rare Plants.

RUPELLIA ELEGANS.—This new and dwarf species has bloomed beautifully at Mr. Young's of Epsom, and Mr. Lowe's of Clapton in the stove. The flowers are of a pretty blue, producing a very lively appearance which has continued for several months successively.

SIPHOCAMPYLUS BICOLOR.—This plant is in fine bloom at Mr. Henderson's, Pine Apple Place, Edgeware Road: its scarlet and yellow flowers, singular in form, are produced for many successive months. It is very ornamental for the greenhouse, or conservatory.

PESTEMON CORREA, is also in fine bloom at Mr. Henderson's, it is a most magnificent species, well deserving a place in every flower garden. The corolla is more than an inch across at its mouth, and such flowers are numerous produced.

HIPPEASTRUM AMBIGUUM LONGIFLORUM.—This new variety is in bloom at the Epsom nursery. The flowers are very large, of a pretty cream colour streaked with crimson. It deserves a place in every greenhouse.

FUCHIA VULGENS is now in bloom in several nursery and flower establishments, and in its vigorous state is a most magnificent object as a Fuchsia. Whether the fine foliage or large and brilliant flowers be noticed, each render it deserving of a place in every greenhouse.

CONSPERNA GRACILIS, is in bloom in the greenhouse at the Epsom nursery, the plant is shrubby, a twiner of graceful habit, the leaves are narrow, about an inch long. The flowers are produced in profusion on the slender stems, in racemes of ten or twelve on each, of a lively violet colour very

much resembling the little British *Polygala*. It is a very neat and pretty species.

ON TROPEÆOLUM TRICOLORUM.—If the bulb be planted so near the surface of the soil in the pot as to leave the upper part half bare, it will swell, and the size will be very greatly increased. This mode of treatment only benefits the bulb, the season it is done, for though it contributes to enlarge the bulb, the shoots are rendered so weakly by it, as to bloom very sparingly. The bulb, however, being so much increased in size, is capable of producing shoots and flowers the following season proportionately larger as well as more of the latter when planted and treated in the following manner the succeeding season. See soil described in pages 148 and 170.

The delicate roots of the *Tricolorum* are not numerous, and consequently do not require a large pot, but when the roots extend to the side of the pot, the operation of dry heat upon it, injures the roots, and causes the foliage to become yellow and sickly. To obviate this, recourse has been had to plant the bulb in a large pot, as the roots do not extend far from the bulb, they would not then be liable to the injury as in small pots; but in this mode the water necessary to give the plant saturates the soil, so as to sour it, and render it injurious to the plant, in which case the foliage turns yellow and sickly, and sometimes the habit is destroyed. It has been found, however, that the injury is obviated, by planting the bulb in a smallish pot when the stem has pushed a foot, the pot is then placed inside a larger one, and the space is filled up with river or other sand. This is kept moist by often watering, and thus keep the roots, which extend to the side of the pot in which the bulb is planted, cool and moist, and renders it less necessary to water the soil. Plants thus treated flourish amazingly, and amply repay the attention paid to them.

FLORA.

ON THE CATTLEYA GUTTATA.—There is perhaps no genus of orchideous epiphytes yet in our gardens such a general favourite as *Cattleya*, a circumstance which is to be ascribed in part to the great beauty of such species as *C. labiata*, *Loddigesii*, and *crispa*; and doubtless also in part to the readiness with which they adapt themselves to the artificial state of life under which they are necessarily preserved in our hothouses.

There is, however, a great difference in the degree of success with which these plants are managed, even by excellent cultivators; for if we see *C. labiata* and *crispa*, with two or three flowers in a cluster, so as also we do see them with a larger number; *C. crispa* in particular, has been grown with seven flowers, by Mr. Paxton, gardener to his Grace the Duke of Devonshire, thus forming a spectacle of almost unrivalled beauty, and pleasing to look upon. The most striking instance of remarkable success in this matter that has come to my knowledge, is in the case of a plant of *C. guttata*, flowered in the hothouse of Richard Harrison, Esq. of Aighburgh, near Liverpool, and by him exhibited at the meeting of this society, on the 6th of December last, when the silver Knightian medal was awarded it.

C. guttata is a native of the woods about Rio Janeiro. It was originally sent to the Horticultural Society of London by the Right Hon. Sir Robert Gordon, and has recently been met with by Mr. Gardener in abundance on trees and plants in the same country.

It generally produces two or three yellowish green flowers, richly spotted with crimson, which is its condition in a wild state; occasionally five or six are seen, and possibly more. The specimen to which I allude had no fewer than twenty-four flowers on one raceme, and was altogether, with the exception of an *Aerides cornutum* in the possession of Messrs. Loddiges, which is the most noble specimen of this natural order of plants that I have had the good fortune to observe. The lovers of Flora will be glad to learn the method which Mr. W. Perrin, gardener to Mr. Harrison adopts to cultivate this beautiful plant. It is as follows.

"The soil in which I grow *Cattleya* is a compost of peat earth, and bro-

ken potsherds in equal quantities. I always pot at the time the young shoots begin to grow, do not use very large pots, but endeavour to proportion the pot to the plant. In potting I always keep the plant a little higher than the top of the pots, as these plants suffer from being disturbed in their roots too often. I do not pot them oftener than can possibly be avoided. The *Cattleya guttata*, the flower of which was sent to the Horticultural Society, has not been repotted for the last three years. I keep the plants in rather a low heat during the winter months, the thermometer generally ranging from 50 to 60 degrees. As the spring approaches, I increase the heat, keeping the hothouse more moist. In the latter end of the spring and summer months, the temperature is maintained between 70 and 100 degrees, and the moisture is increased as much as possible, with a little shade in very bright weather over the glass. When the plants have done flowering, and the young shoots cease to grow, I begin to lessen the quantity of water, till the approach of winter, when it is entirely withheld for that season. As soon in the spring as they begin to make their young shoots, they are potted, if I judge they want; if not, they are top dressed, and I begin to water, as I left off, by degrees, till the summer, when I water very freely."

Mr. Perrin is equally successful in his propagation of *Cattleyas*, and gives the following account of his plan:

My first trial was on a large plant of the *Cattleya crispa*, which had eight old shoots and two young shoots, gone over the side of the pot. I took a sharp penknife and cut the plant through carefully in three places, taking care not to disturb the plant, or to cut away any of the roots. To my great surprise, in a short time I had two fine shoots at the side of each old one where I had cut. I have now eight young shoots, and I believe, had I cut it through at the side of all the old shoots, I should have had sixteen new shoots. I intend to cut the remainder of the shoots through next season. I should say in this place, that the two young shoots that were on the plant before I cut it through, did not suffer by the wound. I think they grew equally as strong and faster than before, which makes me think that the old part of the plant is of no use to the new shoots after they have made their roots. I have been informed that this method of increasing orchideous epiphytes will not succeed, excepting on large established plants; but I have tried it on very small plants, and have found it to answer as well as on larger ones,

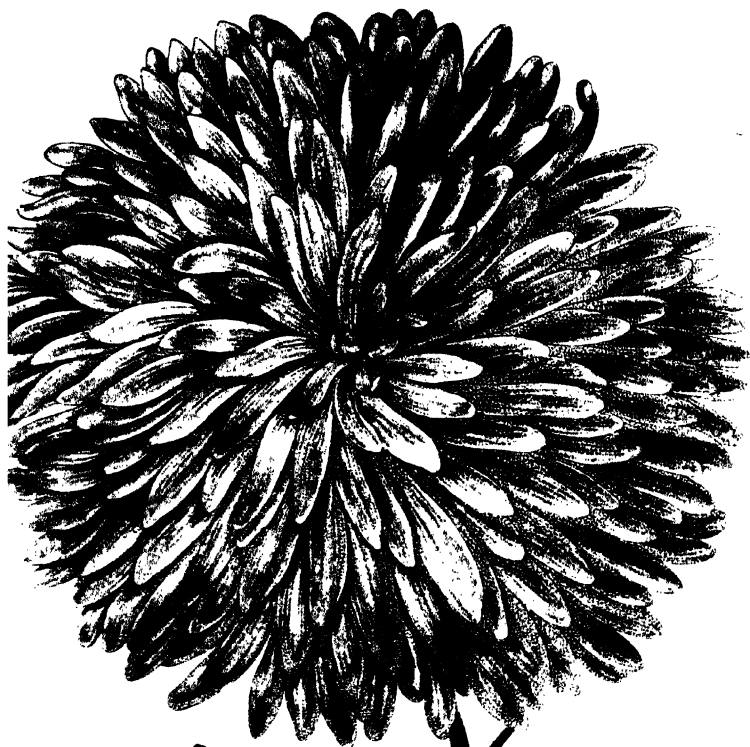
A LIST OF SUCCESSION PLANTS FOR A FLOWER GARDEN.

The following is a list of plants which are well calculated to insure a succession of flowers in the garden, and such a list being requested at page 183, I send it for insertion in the Cabinet.

In the Snowdrop bed, plant Lily of the Valley; turn out from pots in course of time into the Crocus bed, *Clarkia pulchella*; double blue *Hepatica* bed, *Calceolarias*; double Pink ditto, *Schizanthus*; *Scilla bifolia*, *Collinsia bicolor*; *Leptosiphon densiflorus*, *Pelargonium*; *Hyacinth*, *Calceolarias*; *Anemone*, *Clarkia pulchella alba*; *Polyanthus* and *Narcissus*, *Eutoca viscida*; *Ranunculus*, White *Petunia*; *Heartsease*, *Goodenia rubicunda*; *Lupine*, *Mimulus cardinalis*; *Larkspur*, *Lobelia cardinalis*; White Rocket, German *Asters*; Sweet-william, Marvel of Peru; *Clabanthus arabicus*, *Marygolds*; *Pinks*, *Balsams*; White *Saxifrage*, *Clintonia pulchella*; *Roses*, *Coreopsis*; *Nemophilla insignis*, *Fuchsias*; *Hartonia aurea*, Double *Jacobaea*; *Scarlet Zinnias*, in the same bed as *Verbena melindres*.

The great secret in the management of a flower garden, is to have an abundance of things ready in pots, to turn out in the beds when the early flowers are beginning to fade. I shall feel obliged if some correspondent will inform me what annuals will be best to plant out in the shade, and under trees.

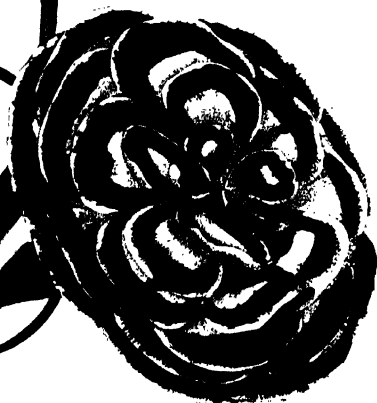
PATRICK.



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TEALEY'S QUEEN VICTORIA PINK.—This new kind has been exhibited at some of the shows in London, and is highly spoken of by some of the Florists. It is said to be a first rate flower, colour, light purple laced.

ON GREENHOUSE AZALEAS.—Many of the most handsome flowering plants are found to die in winter, the fibrous roots being so fine and delicate, that the least excess of moisture causes them to perish; to prevent this, a mode of treatment has been found effectual, by grafting or inarching the delicate kinds upon stalks of the *Azalea indica phœnicea*, that kind being more robust and of vigorous growth, it not only endures well through winter, but those kinds worked upon it, grow much more vigorous and bloom far more profusely.

(Grafting or inarching is easily effected, in the same manner that is done with the *Camellia*, the method deserves the attention of all persons who are cultivators of this charming tribe of greenhouse plants. We were astonished with the vigour and beauty of many superb specimens of the delicate sorts, that by this mode had been rendered very luxuriant; which we saw in several of the London nurseries this spring and summer; stocks are easily procured at a cheap rate, or raised by cuttings in sand.)

CONDUCTOR.

NORTH DEVON HORTICULTURAL SOCIETY, took place at the public rooms, Barnstaple; the show of fruit in consequence of the extreme backwardness of the season, was not large, yet contained many fine specimens of various sorts; but of plants and flowers, the display excelled that of any former occasion; the vegetables also were very fine and in great abundance.

T. Downes, Esq., Marwood, provided a very fine specimen of the *Cactus Speciosissimus*, with a variety of Tender annuals and Ranunculuses. This gentleman had also some very rare plants, which we noticed on a table set apart for them, and a description of which may not prove uninteresting. In the first place, our attention was taken with the Manito or Hand tree, (from its resemblance in form to the human hand;) only three specimens are said to be in existence—two in the small botanical gardens of the palace of Mexico, and one at the town of Tocola; the tree at its full growth, is forty feet high, with a smooth trunk, without branches to the top, but the boughs then stretch over a considerable space, with large leaves and numerous flowers, hanging downwards from amongst the foliage, it bears a stronger resemblance to the plane or the tulip tree, than any other we are acquainted with in Britain. The next was a Lichen from Mexico, a very curious plant, (from the vicinity of Tepic,) which, when immersed in water, resumes the appearance of vegetation, and recovers its green colour, retaining this quality during any number of successive trials. The third is a very singular production, called the Flor de Madera, or Wooden Flower, ascribed by some to the effect of a parasitic creeper, but by others to the injury of a young shoot they grow in a variety of odd forms; but the diseased excrescences of plants are usually shapeless, and covered with bark. Besides these, there are twenty-four varieties of the Cacti, from Real del Monte.

REFERENCE TO PLATE.

1. **CHRYSANTHEMUM INDICUM, var. MINERVA.**—This very fine variety was raised by Mr. Freestone, Watlington Hall, near Downham. Mr. Freestone has been by far the most successful raiser of fine hybrid Chrysanthemums in this country.

2. This unique and pretty variety was also raised by Mr. Freestone.

3. Purple edged rose leaved Seedling Pink, raised by Mr. Neville, Walworth, (who also raised the "Hope Dahlia";) it is admitted by all florists who have seen it, to surpass by far all others of its class. The specimen sent us was the most perfect we ever saw.

FLORICULTURAL CALENDAR FOR SEPTEMBER.

Annual flower seeds, as *Clarkia*, *Collinsia*, *Schizanthuses*, *Ten-week Stocks*, &c., now sown in pots and kept in a cool frame or greenhouse during winter, will be suitable for planting out in open borders next April. Such plants bloom early and fine, and their flowering season is generally closing when Spring sown plants are coming into bloom,

Carnation layers, if struck root, should immediately be potted off.

China Rose cuttings now strike very freely; buds may still be put in successfully.

Mignonette may now be sown in pots, to bloom in winter.

Pelargoniums, cuttings of, may now be put off; plants from such, will bloom in May.

Pinks, pipings of, if struck, may be taken off and planted in the situations intended for blooming in next season.

Plants of *Herbaceous Calceolarias* should now be divided, taking off offsets and planting them in small pots.

Verbena Melindres (*chamædrifolia*.) Runners of this plant should now be taken off, planting them in small pots, and placing them in a shady situation. It should be attended to as early in the month as convenient.

Plants of Chinese *Chrysanthemums* should be repotted if necessary; for if done later, the blossoms will be small. Use the richest soil.

When *Petunias*, *Heliotropium*, *Salvia*, *Pelargoniums*, (*Geraniums*.) &c., have been grown in open borders, and it is desirable to have bushy plants for the same purpose the next year, it is now the proper time to take off slips, and insert a number in a pot; afterwards place them in a hot-bed frame, or other situation having the command of heat. When struck root, they may be placed in a greenhouse or cool frame to preserve them from frost during winter. When divided, and planted out the ensuing May in open borders of rich soil, the plants will be stocky and bloom profusely.

Tigridia pavonia roots may generally be taken up about the end of the month.

Greenhouse plants will generally require to be taken in by the end of the month, if allowed to remain out much longer, the foliage will often turn brown from the effects of cold air.

Plants of *Pentstemons* should be divided by taking off offsets, or increased by striking slips. They should be struck in heat.

PANZERS.—The tops and slips of *Panzers* should now be cut off, and be inserted under a hand-glass, or where they can be shaded a little. They will root very freely, and be good plants for next season.

Evergreen hardy shrubs may be planted, puddle and water freely till the autumn rains set in.

THE FLORICULTURAL CABINET,

OCTOBER, 1st, 1838.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I. ON THE PLANNING AND FORMATION OF ORNAMENTAL FLOWER BEDS.

BY MR. G. E. TURNER, MONKTON FARLEIGH, NEAR BATH.

I NEVER enter a flower garden without pleasure, or leave it without satisfaction. Each little plant has beauties and attractions, which never fail to captivate and delight. In the excellent pencilling, and the delicate hues of a flower, I can trace the eternal wisdom and unbounded benevolence of its Creator, and read and read

“ And read again, and still find something new,
“ Something to amuse, something to instruct.”

And it is because I have myself derived such refined gratification from floricultural amusements, that I would humbly contribute my mite, to the valuable treasury of useful and practical information, whose benefits are distributed to the public, through the widely circulating medium of the Floricultural Cabinet.

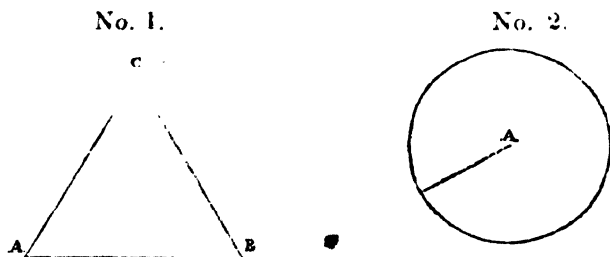
Now, although in every garden each individual flower is the immediate and proper object of our admiration, yet it must be
Vol. VI. No. 68.



allowed that a just arrangement of height, and combination of the colour, will add much to general beauty of the whole picture; and this is easily and usually effected in proportion to the taste of fancy which every (even the most uneducated) gardener possesses in a greater or less degree.

These beauties, I observe, are displayed because they depend much upon taste and little upon skill: not so however with the formation of beds. Though a point of paramount importance in forming an ornamental flower garden, yet there are but few ordinary gardeners who are capable of planning or cutting out a number of beds with taste or precision. They may, perhaps, form in their minds many a beautiful and elegant design, and yet be quite unable to reduce it to practice, and the reason is this, it cannot be done but upon mathematical principles, which have never yet been placed within their reach, and it is to communicate these principles in a simple and appropriate form, that I beg to offer the following plan to your notice, in which I trust, the most learned of your readers will find nothing to despise, and I am sure that many of your more humble subscribers, will acknowledge much to be acceptable, interesting, and useful.

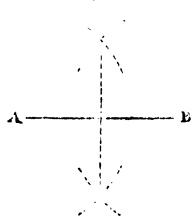
The following figures may be drawn for practice on the boarded floor of a room with chalk.



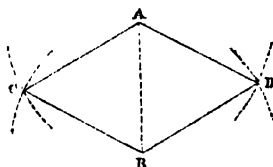
No. 1.—Draw A B, and with its length, from each end describe arcs cutting each other in C: join A B.

No. 2.—Fix a stiff stick in the centre A, slip the loop end of your twine on the stick, and draw the circle at any distance from A.

No. 3.



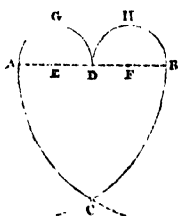
No. 4.



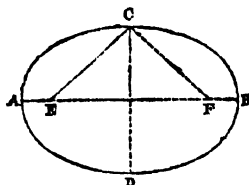
No. 3.—To divide a line into two equal parts, describe corresponding arcs at any distance on each side of A B, and from one point where they cut to the other, strain your line, and it will equally divide A B.

No. 4.—Upon each side of A B, describe the triangle A C B and A D B as in No. 1.

No. 5.



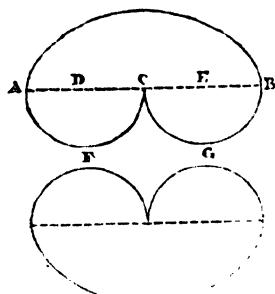
No. 6.



No. 5.—From A and B, describe the arcs A C and B C divide A B in D; and again divide A D and B D in E and F, and from E and F describe the half circles A G D and B H D.

No. 6.—Draw A B, divide it and draw C D equal to two-thirds of A B. From C draw C E, C F, each equal to the half A B; and in the points E and F fix a stiff stick, on which slip the ends of a piece of twine by loops, equal to A B, then carry a pointed stick round by the twine, and the oval will be thus correctly drawn.

No. 7.



No. 7.—Upon A B describe half an oval as in No. 6. Divide A B in C, and again divide A C and C B in D and E, and from these centres describe the half circles A F C and C G B.

ARTICLE II.

ON SAVING SEED FROM CHRYSANTHEMUMS*.

BY MR. R. FREESTONE, WATLINGTON, NEAR DOWNHAM, NORFOLK.

WHEN the flowers are fully expanded, take a fine camel hair pencil, and fill it well with pollen from any of the semi-double flowers, apply this to the stigma of the two outside rows of petals. When the flowers begin to decay, cut them off as close as you can without injuring the seed-vessels. Place the plants in the warmest and driest situation, a dry stove is the best ; watch them daily to see that no mouldiness contracts upon the flower-stems or seed vessels, if any appear, let it be wiped off.

The seed will be ripe in about six weeks from the time of impregnation, when so, cut and hang it in the driest room you have.

Early in February let the seed be cleaned from the husk, and sown in light soil, covering it a quarter of an inch with finely sifted compost; place the pot in a cucumber or pine-pit worked with dung, and in about a month from the time of sowing, the plants may be expected up; as soon as they are strong enough, pot them off into small sixties, re-pot them as the pots become full of roots, until you get them into pots of nine inches in depth

* In this country it is necessary to force them into bloom as early as possible.

and diameter; keep them in heat as long as possible without drawing the plants, and many of them will bloom the first year.

R. FREESTONE.

ARTICLE III.

ON THE HARDIHOOD OF THE MYRTLE.

J. G.

ABOUT seventeen years ago I planted a myrtle about a foot high against a kitchen wall, and sheltered it with matting, every winter; it grew the height of the wall (about eighteen feet) two or three times, and flowered profusely. The winter before last, having removed, I sent for this tree, it was by some neglect left on the lawn, after having been dug up two nights with four or five degrees of frost; it was planted in a southern aspect, without shelter, all the winter. It dropped in consequence some of its leaves, and did not flower, no doubt on account of its removal, otherwise in the autumn it was as luxuriant as ever.

This last winter it was unsheltered through all the severest weather, and appears to have suffered much the same as the Bays and Lauristinus. Unfortunately it was cut down with the latter, or I have very little doubt it would have shot out in its upper branches. It has now innumerable shoots a foot from the ground. Its roots when dug up, contrary to what my gardener expected, extended only about six or eight inches from the trunks, of which latter, there were three or four, three inches in diameter.

The purport of sending this is the inducement it may hold out to some of your readers to grow it in sheltered situations as a hardy tree, few trees would look handsomer as a standard, and I have but little doubt that with shelter the first and second winters it would thrive in most English counties, I should say this was grown in Essex five or six miles from London, and the thermometer one night last winter was below Zero.

J. G.

July 13, 1838.

P. S. A *Magnolia grandiflora* has survived the winter without shelter on the lawn in the same garden.

ARTICLE IV.

ON THE CULTURE OF THE HYACINTH.

BY H. L.

As the time for planting bulbous roots is approaching, I send these lines on the culture of the Hyacinth, deeming it probable you may consider them worthy a place in the Floricultural Cabinet. It is much to be regretted that so beautiful a flower should not be more generally cultivated, especially as it blooms so early in the spring, at a time when flowers are a desideratum.

Hyacinths may either be planted in pots, or beds, or be placed in bulb glasses; which latter method is the favourite one, especially with the ladies.

I shall therefore first offer a few remarks on the blooming of them in water.

The bulbs should be put into the glasses sometime in the month of October or November, but to speak more exactly, when the incipient fibres or roots make their appearance, and the scapus or flower stalk be just discerned making its way to the top, the water should cover the whole of that part whence the fibres proceed. It must be soft or rain water, and requires changing as often as it becomes offensive, which generally occurs in about ten days after the putting in, and afterwards varies from a fortnight to three weeks.

They should be placed in a situation where the light is not very strong, and unless for forcing, where there is no artificial heat. The mantle-piece of a room in which there is a fire, must be avoided, for nothing tends more to cause a deterioration in the bells, and to produce an unmanageable tall stem.

Time will not permit me to add more now, as I wish to transmit this in time for insertion in the next number of your Work, and my concluding observations on the culture of Hyacinths in beds or pots, shall, if it meet your concurrence, appear in the November Number.

H. L.

Islington, 14th Sept, 1858.

[We feel much obliged by the kindness of our correspondent, and shall feel additionally so, to receive the other remarks as soon as convenient.]

ARTICLE V.

ON A LIST OF PLANTS FOR FURNISHING A FLOWER GARDEN, SO AS TO BLOOM SUCCESSIVELY.

HAVING a few moments to spare from my daily avocations, I have drawn up a list of plants, such as I think most suitable for the plans which are inserted in the July cabinet, and I hope it will be of service to many of your readers; for I am sorry to say, there are but few flower gardens attended to as I should like to see them, viz. in flower most of the season.

I should recommend (which is not in my list) a few of the best annuals to be sown in pots or beds in the autumn, so as to be fit for transplanting into the beds that will be done flowering about the end of March, as there will not be many which will be in my list fit for planting out before the middle of May.

Some of your readers may think that I should have inserted many plants into my list that I have not, if there are any such, my advice to those individuals is, to introduce into their gardens whatever may tend to give their flower beds the best effect.

But I must say, that after four years studying and making lists of such plants as I thought most suitable, for prolonging the interesting scenery of a flower garden, that the following list will meet the object in view, viz. a display of plants which are in bloom most part of the season.

All the bulbs, except the Tulips, should remain in the ground and only be replanted every three or four years.

If my public assistance can be of any service to you at any time it is at your command, for I rejoice to see you adopting the system of giving plans, which is a new era in the Cabinet, and will, no doubt, be gratifying to many of your readers, and my worst wish for you is, go on and prosper.

J. M.

A List of Bulbs for flowering in the Spring. A List of Plants for flowering in the Summer.

Scilla siberica
Scilla carnea
Scilla bifolia
Scilla bifolia alba

Verbena melindris latifolia
Verbena multifida
Verbena multifida alba
Nierembergia calycina.

A List of Bulbs for flowering in
the Spring.

Galanthus Nivalis plena
Narcissus minor
Erythronium Dens canis
Erythronium album
Crocus luteus
Crocus lageneœfforus
Crocus Sabini
Crocus obvatus
Crocus albidus
Crocus elegans
Crocus leucorhyncus
Crocus spectabilis
Muscaria plena
Leucojum verra plena
 Double yellow Tulip
 Double red Tulip
Oculus solis Tulip
 Early single Tulip
Narcissus jonquilla
Narcissus angustifolia
Scilla non scripta alba
Scilla non scripta carnea
Anemone apennine
Anemone nemorosa plena
Anemone double scarlet
Anemone double crimson

A List of Plants for flowering in
the Summer.

Lobelia unidentata
Verbena radicans
Lobelia erinus
Tournefortia heliotropioides
Lotus jacobœus
Lobelia axilaris
Nirembergia gracilis
Verbena Tweediana
Verbena incisa.
Verbena Arranania
Anagallis grandiflora
Anagallis Philipsii
Oenothera missourensis
Oenothera taraxifolia
 Pink nosegay Geraniums
 Scarlet nosegay Geraniums
 Frogmore scarlet do.
 Prince of Orange and Princess
 Charlotte do. to be mixed
Heliotropium peruvianum
 Petunias of varieties
 Calceolarias of varieties
Senecia elegans
Phlox Drummondii
Verbena venosa
Salvia chamædryoides
Alonsoa linarifolia

ARTICLE VI.

A LIST OF THE MOST SUPERB ROSES IN THE VARIED CLASSES.

SELECTED BY MR. CHARLES WOOD, MARESFIELD NURSERY, UCKFIELD,
 SUSSEX.

CONSIDERING the difficulty which often occur to Amateurs in looking over an extensive catalogue of roses in order to select a few of the best in the different divisions, I have taken the liberty to annex an abridged list, of the best and most esteemed varieties which have proved to be the most distinct and remarkable in the different classes from which they are selected, sincerely hoping that it may be a guide, and prove acceptable to some of your numerous readers. I intend, with your per-

mission to forward you in spring the most approved varieties of China, Odorata, and Laurencia Roses which are considered the most worthy of cultivation.

An abridged List of Select Roses.

PORTLAND OR PERPETUAL.

Antinous, very fine cupped, dark crimson, partially spotted.
 Bernard, most magnificent rose colour.
 Claire de Chatelet, reddish purple, very fine.
 Couronne de Beranger, fine bright rose colour.
 De Trianon, fine light pink.
 D'Esquermes, large rose colour.
 Flon, compact bright rose-colour.
 Louis Philippe, dark purplish crimson, very large.
 Stanwell Perpetual, pale flesh colour.

HYBRID PERPETUALS.

Gloire de Guerrin, most splendid bright dazzling scarlet
 James Watt.
 Pysche, bright fiery vermillion, very fine.

FOUR SEASONS.

Blush, fine cupped semi-double blush.
 Pink, bright pink.
 Scarlet, scarlet.
 White, expanded white.

ISLE DE BOURBON.

Armosa, splendid pink, cupped.
 Aristides, rose-colour, small.
 Augustine Lelieur, large pink, very fine.
 Du Bourg, large splendid pale blush.
 Gloire des Rosamènes, bright dazzling carmine.
 Julie de Loynes, beautiful white, flowering in corymbs.
 La Tendresse, cupped, delicate pale rose.
 Marshall Villars, fine purplish deep rose.
 Madame Désprés, splendid large lilac rose.
 Thérésita, bright rose colour,

NOISETTES.

Aimée Vibert, splendid pure white in immense clusters.

A' Buerre Frais, yellow, fading white.
Boulogne, cupped, dark violet purple.
Bicolor, blush and rose.
Belle d'Esquermes, bright rose colour.
Camellia rouge, fine red.
Grandiflora or **Lee's Noisette**, fine large blush.
Jaune Désprés, beautiful bronzy reddish nankin yellow, very changeable.
Lamarque, pale sulphury straw colour.
La Biche, very large blush.
Rothanger.

MUSK ROSES.

Double New, very fine double yellowish white.
Nepalensis Alba, double white.
La Princesse de Nassau, splendid yellowish white.

MICROPHYLLA.

Alba Odorata, large whitish cream.
Coccinea, bright scarlet rose colour.
Hybrid Pourpre de Luxembourg.
Nouveau Rouge.
Rose Violacée.
Violet Cramoisis.

BRACTEATA.

Maria Leonida, very double white tinged.
New Macartney, single cream colour.

CLIMBING ROSES.

Sempervirens, **Adelaide D'Orleans**, splendid large cream colour.
 **La Princesse Louise**, beautiful blush. }
Banksian, **Yellow**, pure yellow, in immense clusters.
 **White**, splendid small pure white in immense clusters.
Multiflora, **Italian**, semidouble bright pink.
 **Laure Davoust**, deep pink, changeable, very splendid indeed.
 **Russelliana**.
Ayrshire, **Blush**, fine large blush.
 **Countess of Lieven**, tinged white

Ayrshire, Dundee Rambler, white edged with rose.

..... Myrrh scented, pinkish cream colour.

..... Rose Angle.

..... Variegated, shaded pink.

Boursoult, Blush, immense large blush, deeper coloured.

x Crimson or Amadis, splendid bright, velvety purplish crimson.

..... New Hybrid Gracilis, bright purplish rose with curious foliage.

Hybrid climbing, Félicité Perpetué.

..... Well's White.

..... Indica Major.

..... The Garland.

SWEET BRIARS.

Carnation.

Double Pink, very splendid double compact pink.

Double Yellow, pale straw colour.

Rose Angle, pink

PROVINS ROSES OR GALLICAS.

Aspasié, globular, fine blush.

Adzit Le Couvreur, fine light purplish rose, spotted with white.

Berlise, dark purplish crimson, with red spots.

Belle de Fontenay, bright red, with pale edge.

Bizarre, Marbré, marbled and mottled flesh-colour.

Camaieu, lilac rose colour, delicately striped with white.

Compte de Murinais, spotted slate colour.

Cleliée, rosy deep blush, very large and very splendid.

Despienne, very double, partially edged with rosy purple, compact, curled, curious pink blush.

Duc d'Orleans Ponctué, bright rose colour, elegantly spotted.

Fanny Parrisot, pale lilac blush.

Fanny Essler, purple spotted with rose.

Gloire de France, pencilled bright rose.

Gonzalve, dark red.

Hortense Beauharnais, light blush, rather spotted.

Hersilie, very deep spotted rose colour.

La Petite Duchesse, a very pretty small bright scarlet, flowering in clusters.

Lycoris, deep pink, spotted.

La Muskowa, one of the very darkest, most splendid velvety purple.

Madam Campan, bright rose colour, splendidly spotted with pure white.

Philippe Quatre.

Renonculle Ponctué, deep red ground, small double reconculus shaped, and spotted with white.

Robert le Diable, compact bright rose colour.

Séphora, bright red rosy lilac.

Triomphe de Rennes, purplish crimson red.

Uniflore Marbrée, marbled rose, very fine.

Village Maid, splendid light purple ground, striped with lilac.

PROVENCE ROSES.

Adèle de Senángc.

Antoine d'Ormois.

Celestine, blush.

Double yellow, very fine large sulphur and yellow.

Des Pientres.

Duchesne, blush, very fine.

Fringed or crested Moss, large bright rose colour, with beautiful crested buds.

Indiana, large blush.

Unique Panaché pure white with rosy stripes, does not always come striped.

MOSS ROSES.

Crimson or Damask, fine crimson.

De la Fleche or Scarlet, purplish crimson.

Mousseuses Zoé, rose coloured leaves, and covered with moss.

Rouge de Luxembourg, very deep rich crimson red, nearly purple.

White Bath, very pure white.

ROSA ALBA.

Belle Grise.

Blanche Fleur, very fine double blush white.

Deshouilliers, fine white globe.

Félicité Parmentier, most beautiful, very double curled, splendid light pink blush.

L'Ingenue, pure white, splendidly tinged with yellow.

Reines des Belges, a superb pure, very double white.

DAMASK ROSES.

La Ville de Bruxelles.

Madame Hardy, immense large pure white globe, very splendid indeed.

Philodamie.

Painted Damask or Leda, splendid creamy white, beautifully margined with purple.

Madame Feburier, fine large bright pink, occasionally flowering in the autumn.

HYBRID CHINA ROSES.

Anjou.

Adolphe Cachet, purplish red.

Ancelin, large lilac rose, very splendid.

Astarade, deep shaded violet purple

Athalin, bright showy pink, sometimes spotted with white.

Brenus, bright dazzling fiery red, carmine, immensely large, very splendid indeed.

Blanc, splendid pure white in immense clusters.

Becquet, very splendid dark rich purple.

Belle Marie, fine lilac, rosy blush.

Boila or La Nubienne, large globular light purple.

Bouquet Charmant, splendid pinkish blush.

Coupe d'Amour, small cupped, beautifully bright, pinkish rose colour.

Coutard, splendid bright rose colour.

Duke of Devonshire, rose colour, with lilac stripes, very large, does not always come striped.

Delaage, rich purple.

Elizabeth Fry.

Fulgens or Malton, bright fiery dazzling vivid show scarlet.

La Tourterelle or Parni, dove colour, very beautiful.

Las Casas, very large most magnificent rose colour.

Las Casas D'Angers, rose.

Louis Phillipe 2d.

Moyenna, very pretty cherry colour violet.

Reine de Belgique, large rosy lilac, very fine.

Riego.

Saudeur panaché or king of Roses, most splendid rosy lilac, elegantly striped with white.

Triomphe de Guerrin, splendid pale rose colour.

Thurette, deep small double dark violet, reflexed and velvety, large rosy lilac.

ARTICLE VII.

REMARKS ON THE ROSE.

(Continued from page 208.)

Oriana when confined a prisoner in a lofty tower, threw a wet rose to her lover to express her grief and love; and in the floral language of the East, presenting a rose-bud with thorns and leaves, is understood to express both fear and hope; and when returned reversed, it signifies, that you must neither entertain fear or hope. If the thorns be taken off before it is returned, then it expresses you have every thing to hope; but if the leaves be striped off, it gives the receiver to understand that he has every thing to fear. The pronoun *I* is understood by inclining the flower to the right, and the pronoun *thou*, by inclining it to the left.

The poet Bonnefons sent to the object of his love a nosegay consisting of a white and a red rose, the one to indicate the paleness of his complexion, caused by anxiety, and the other by its carnation tint, was to express the flames of his heart.

The flower which Philostratus dedicated to Cupid is made to speak the language of love. We are told that some persons pass through life without feeling the arrows of the young god; and we read of others who could not endure the sight and smell of roses. Mary de Medicis, it is said, detested roses even in paintings, and the knight of Guise fainted at the sight of a rose. These strange aversions are unnatural, and the objects deserve our pity.

Man alone seems born sensible to the delights of perfumes, and employs them to give energy to his passions, for animals and insects in general shun them. The beetle is said to have such

an antipathy to roses, that the odour of this flower will cause its death; from which the ancients devised the allegory, to describe a man enervated by luxury, by representing him under the image of a beetle expiring surrounded by roses.

Madame de Genlis tells us that formerly the rose was so precious in France that in several parts of that country the inhabitants, were not allowed to cultivate it, as if all but the powerful were unworthy of such a gift; and at other times we find it mentioned among the ancient rights of manors, to levy a tax or tribute of so many bushels of roses, for the provision of rose-water for their lord, whose table was also covered with rose leaves instead of napkins. The French parliament had formerly a great day of ceremony, called "Baillée de Roses," because great quantities of roses were then distributed.

We presume that it was formerly more customary to use rose water, in this country than at present, as we find amongst the charges in the account of a dinner of Lord Leiyster, chancellor, of the university of Oxford, Sept. 5th, 1570: "For iij oz. of rose-watere, for boyelde meats, and leaches, gelleys, and drie leaches, and marche payne, and to wash afore dinnere iij s. ix d."

Rose water is still in such demand in Damascus, for the purposes of cookery, that many hogsheads of it are sold daily in the markets of that city.

As we now possess upwards of eight hundred different kinds of Roses, it would be in vain to attempt the description of all the varieties and sub-varieties, which nothing short of the most minute inspection can discover, and the nicest pencil pourtray. To such of our readers as wish to see the roses pictured, we recommend them to inspect the works which have lately been published in this country, and "*Les Roses, par Redouté*," published at Paris in three folio volumes.

Of the roses which are natives of these islands, the British Botanist of 1820, notice twenty belonging to England, four to Scotland, one to Ireland, and one to the Scilly Islands. These are made to form seven distinct species in the *Hortus Kewensis*, the most delightful of which is the sweet-brier, or eglantine, *Rosa, Rubiginosa* or *Eglanteria*

" By sweet-brier hedges, bath'd in dew,
——— Let me my wholesome path pursue." WHARTON.

"Come gentle air! and while the thickest bloom,
 Convey the jasmín's breath divine,
 Convey the woodbine's rich perfume,
 Nor spare the sweet-leaved eglantine." SHENSTONE.

It is noticed by Chaucer, as long back as the middle of the fourteenth century :

———— "The greene herber,
 With sycamore was set and eglaterre.

This species of rose is found in chalky or gravelly soils, on heaths or hedges in most parts of Europe ; but the size and fragrance of the leaf is greatly improved by cultivation, that has produced six varieties of this fragrant leaved brier, the most beautiful of which are the double-flowered and the double moss brier. It is hardly possible to scatter this shrub too thickly in the plantation, and when we pass hedges of this odorous thorny plant, after a spring shower, we feel not only delighted but refreshed by the fragrance.

The name of Eglantine, by which the sweet-leaved brier is known, is taken from the French *eglantier*. That we so often find French names given to our native plants is not singular, as after the conquest, French became the written language of this country for many centuries. The Greeks called all the wild roses or briars *Kunorodon*, because the root was thought to cure the bite of a mad dog, and the Latins for the same reason, named them *canina*, and from them we call one of our hedge briars, the Dog-rose.

It is the Dog-rose, *rosa Canina*, that decorates our hedge-rows with its tall arching branches and lively odorous flowers in the months of June and July. From the petals of this blush-coloured wild rose, a perfumed water may be distilled, which is thought to be more fragrant than that from garden roses. The leaves of this brier, when dried and infused in boiling water, are often used as a substitute for tea, and have a grateful smell and substringent taste.

The fruit of this brier also forms one of the greatest beauties amongst the autumnal tints, being of a bright scarlet, perfectly smooth and glossy, and of an elegant oblong shape. This brier is often called the hip tree, from the name of the fruit.

(To be continued.)

REVIEW.

The Rose Fanciers Manual.—By Mrs. Gore. 12mo, pp.434.
London, 1838.

In the preface, Mrs. Gore informs us that she has undertaken this work "for the use of the inexperienced English amateur; and, in order to make it practically available, scientific terms have been, as far as possible, laid aside, and the simplest form of language adopted." (p. vi.) In the remainder of the preface, we are informed that, though roses are easier of propagation in France they attain their highest perfection in England; in proof of which, reference is made to the nurseries of the principal English rose growers. The rose attains a larger size in England, from the comparative moderation and humidity in the climate; and the blossom of any individual kind of rose remains a longer time expanded in our cloudy atmosphere, than under the intense heat and light of a Continental sun, unobscured by clouds or mists.

"The real source of the eminence of the French in the culture of roses, is the fact that it absorbs the almost exclusive attention of their horticulturists. The high price of fuel places the cultivation of the tender exotics (by which English amateurs are chiefly engrossed) almost out of the question; and, as the French adhere to the wise custom of repairing to their country seats in May, and quitting them in December, their attention and money are appropriated to the improvement of such plants as adorn the flower-garden during the summer season. They care little for any that cannot be brought to perfection in the open air; and precisely the same motive which promotes the cultivation of the dahlia in England, has brought the rose to greater perfection in France.

"The first impulse was given to the culture of the rose in France at the commencement of the present century, under the auspices of the Empress Josephine, who caused her own name to be traced in the parterres at Malmaison with a plantation of the rarest roses, at a considerable expense, by Dupont, the gardener and founder of the celebrated collection attached to the Luxembourg palace.

"At the death of Dupont, Monsieur Hardy succeeded to his office; who for twenty-five years has been making annual sowings of seeds obtained from all quarters of the globe, with a view to the creation of varieties; and is probably the most scientific rose grower in Europe. The Chamber of Peers, however, and its grand referendary, by whom his services are remunerated, have lately rendered the rose school of the Luxembourg Nursery secondary to the school of vines; a matter of important national interest to the land-owners of France.

"The original roses of the Luxembourg, as well as those of the royal nursery at Trianon, are not purchaseable; but are given away to respectable applicants or exchanged for other plants with eminent nurserymen, by whom they are propagated and dispersed. In this way the *Rosa Hardii berberifolia*, obtained this year by the accidental impregnation of that remarkable

plant, the *Rosa simplicifolia*, or *R. monophylla* [*Lowea berberifolia* Lindl.]. *R. microphylla* growing near it, has fallen into the hands of Cels, by whom it will be shortly placed in circulation.

"This especial dedication of the Luxembourg gardens to the cultivation of roses has done much towards their multiplication in France; while the *Jardin des Plantes*, under the able care of Neumann, as well as several provincial botanic gardens, have taken part in the cause. At Nantes, for instance, was produced a few years ago, from the accidental impregnation of a Macartney rose by a *Rosa indica odorata*, the beautiful *R. Maria Leonida*, now in general favour, which flowers in great perfection till the commencement of winter; while among the Paris nurserymen remarkable as rose-growers, Noisette has given his name to a most beautiful and prolific variety, obtained in the first instance from Charleston, in the United States, by his brother, Philip Noisette. Having amassed a considerable fortune, the Noisettes no longer continue to raise roses from seed; and this branch of cultivation is engrossed at Paris by Laffay, a most enthusiastic and intelligent gardener, and Vibert, who has written some valuable treatises on the culture of roses. Cels and Sisley-Vandael export largely to England; the latter excelling in the production of the *Rose Thé*, or scented China rose. Calvert and Prevost of Rouen also dispatched large collections to England; and Sedy and Plenty, at Lyons, have obtained many curious varieties. Boursault's celebrated collection has fallen to decay; while that of one of the first growers who attained much distinction, Deneumet of St. Denis, was cut up by the English troops in 1814; when the horticulturist, unable to obtain indemnification from government, proceeded to Russia, and re-established himself with honour and success. [He has the management of the government garden at Nikitka in the Crimea.]

"In the royal rotary at Versailles, standards may be seen which have attained 18ft. in height, grafted with twenty different varieties of rose. The same branch of rose culture is practised with great success at Brussels and Düsseldorf. In the imperial gardens at Monza, near Milan, thirty-nine varieties of China roses have been obtained by the late celebrated Villaresi; and Genoa, Marseilles, and Avignon have added to the number. At Lyons, much attention has been devoted to the culture of roses; and among other rarities now flourishing in their gardens, they have that beautiful miniature, the Lawrencean rose (which in England attains a height of between 2 and 6 inches).

"The numerous varieties of our native Scotch rose are in high estimation on the Continent, as well as many others obtained in England; such as the *R. Smithii*, a double yellow rose, obtained by the gardener of Lady Liverpool; the *George IV.*, obtained by Rivera, jun.; the *Starwell* perpetual, an accidental hybrid, found in Mr. Lee's garden, at Stanwell; and many varieties of moss roses, the greater number of which beautiful family were obtained in England. The China or Bengal rose, sent to the Botanic garden at Kew about the year 1800. The *Rosa Banksii*, and that singular rose, *R. microphylla*, both natives of China, also reached the Continent by means of the botanists of England.

"There is not a more perplexing or more amusing branch of horticulture, than that of sowing with a view to the production of new varieties. Every season affords valuable acquisitions; and at the annual epoch of flowering, the excitement of the enthusiastic rose-grower is at its height. Laffay, for instance, has this season obtained a vigorous and very thorny variety of *Rosa Banksii*; which, should it fulfil his expectations, by producing, next summer, flowers of a vivid pink, will afford a highly valuable addition to the Banksian tribe.

"In addition to the interest excited by his seedlings, the attention of the rose-grower is eagerly directed to the accidental varieties produced by what is called 'a sport,' or branch losing the habit of the plant on which it grows, and assuming new specific characters. In this way the Bath moss rose, or

mossy unique, was originated at Clifton; and the beautiful *Rosa cristata* in Switzerland. The Rose unique was discovered at the commencement of the present century, in a cottager's garden, among a plantation of roses of the hundred leaved or cabbage, kind, which is peculiarly subject to sport, either from the excessive vigour or imperfect vegetation of the subject. The mossy rose de Meux, or pompon mosseux was discovered five and twenty years ago, in the garden of an old lady in the west of England, of whom it was purchased by a nurseryman for five guineas; certainly a sport, as the rose de Meaux is known never to bear seed in England. The Ayrshire roses were chiefly obtained from seed at Dundee, in Scotland. Brown's superb blush was raised at Slough, near Windsor; a seedling of the *Rosa indica odorata*, and the yellow sweet briar, at Pitmaston, by Mr. Williams. To enter into the origin of even the finer modern varieties would, however, be an endless task." (p. xiii.)

(TO BE CONTINUED.)

A Practical Treatise on Constructing and Heating Horticultural Buildings—By J. W. THOMPSON. Published by Groombridge, Panyer Alley, London.

This valuable Treatise being the production of a celebrated gardener of long experience, and of well known scientific and practical attainments as an horticulturist and landscape gardener, we think it a duty we owe to all horticulturists, whether amateur or gardener, to direct their attention to this little publication; no gentleman having a hothouse to manage or build, or to heat with hot water, or by any other mode of raising temperature, should be without this truly instructive work.

Thompson's observations are the result of long experience, and in our opinion the conclusions he has arrived at for the management of hothouses, &c., must accord with the views of every practical gardener. His observations relative to non-practical garden architects being consulted on horticultural erections, and his strenuously advocating the cause of every practical gardener interested in these subjects, should inspire in their breasts a feeling of gratitude, and induce them in return, to render him every assistance in their power by introducing his plan of boiler for heating with hot water.

We observe that the opinions of 'The Civil Engineer,' and 'The Mechanic's Magazine,' who have written on his plan of boiler, is in accordance with our own, and they fairly admit it to be the best and most economical system yet known for heating with hot-water.

We consider his conclusions at the end of the work, for the management of hothouses, &c., to be founded on sound philosophical, and practical reasoning.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON THE FLOWERS OF THE LUPINUS POLYPHYLLUS ALBUS DROPPING OFF, &c.—I have been struck with the falling off of the florets of the *Lupinus Polyphyllus albus*, (sometimes before they are fully expanded), and I have never had the satisfaction of growing it in the same perfection as the blue. I have had the opportunity of trying it in various situations in my garden, and in different kinds of soil, and the same thing occurs throughout this neighbourhood. I have remarked the circumstance for the last three years. Perhaps you, or some of your subscribers could explain it, and point out a remedy, by your attention to which, you will oblige

Your Obedient Servant, B.

Aigburth, near Liverpool, July, 1838.

ON A LIST OF RHODODENDRONS, &c.—A Constant Subscriber would be much obliged by an article on the *Rhododendron*, including a list of the best sorts for general purposes, particulars of the growth, cultivation, and method of increasing.

Can *Magnolias* be best increased by budding, grafting, or layering? if by either of the former, what kind of stocks is most suitable? and at what period of the year is the operation to be performed? I have a fine variety of *M. laurifolia*, which I am desirous of increasing as soon as possible.

(The other queries sent by A Constant Subscriber, will be inserted next month—*COND.*)

REMARKS.

BIRMINGHAM DAHLIA SHOW.

Held on September, 12th, and 13th.

Great as was the public expectation, from what had been the current report of the beautiful display that might be expected from this annual exhibition, the result proved that the anticipations which had been raised, were fully realized. The company was very numerous and highly respectable.

THE PRIZES WERE AWARDED TO THE SUCCESSFUL COMPETITORS:
AS FOLLOWS.

Premier Prize, twenty-four blooms. Mr. Widnall, Grantchester, near Cambridge—*Widnall's Ne plus Ultra*, *Duke of Devonshire*, *Rienzi*, *Cambridge Hero*, *Horatio*, *Conductor*, *Royal Standard*, *Sussex Hero*, *Dodd's Mary Queen of Scots*, *Variabilis*, *Unique*, *Rhoda*, *Topaz*, *Lady Kinnaird*, *Glory of the West*, *St. Leonard's Rival*, *Ruby*, *Springfield Rival*, *Conqueror of Europe*, *Ovid*, *Eva*, and *Brown's Sarah*.

Amateurs, twenty-four blooms. First prize.—Mr. Searle, Cambridge—*Countess of Mansfield*, *Kingscote Rival*, *Rienzi*, *Widnall's Perfection*,

Squibb's Purple Perfection, Conqueror of Europe, Knight's Victory, Sir H. Fletcher, Topaz, Ruby, Springfield Major, Rosa Elegans, Blandina, Etonia, Jeffrie's Triumphant, Suffolk Hero, Middlesex Rival, Sarah, Countess of Torrington, Beauty of Lullingstone, Dodd's Mary, Royal Standard, and Conductor.

Second Prize.—Mr. Hellier, Oxford—Middlesex Rival, Dodd's Mary, Sir H. Fletcher, Suffolk Hero, Stone's Yellow, Louthianum, Oxford Rival, Diadem of Flora, Knight's Victory, Beauty of Bedford, Topaz, Juliet, Springfield Rival, Glory of the West, Grand Duke, Day's Mary Anne, Blandina, Napoleon, Lady Kinnaird, Bontesholl, Ruby, Flower of Eden, Bronze, Pandora.

Third Prize.—Mr. Sadler, at Sir Charles Throgmorton's, Coughton Court—Rival Sussex, Smith's Lord Byron, Elphinstone's Purple Perfection, Sir Isaac Newton, Royal Standard, Clio Perfecta, Marquis of Lothian, Dodd's Mary, Hopwood's Lady Anne, Rosa Superba, Foster's Eva, Jeffrie's Triumphant, Ansell's Unique, Beauty of Lullingstone, Diadem of Flora, Marchioness of Tavistock, Knight's Victory, York and Lancaster, Doctor Hailey, Girling's Horace, Rosetta, Middlesex Rival, Hermoine, and Melberry Rival.

Fourth Prize.—Mr. Mitchell, Lord Vernon's, Sudbury Hill, Derbyshire—Sir H. Fletcher, Dodd's Mary, Lady of the Lake, Lady Cowper, Hopwood's Lady Ann, Countess of Sheffield, Springfield Rival, Mount Pleasant Rival, Giraff, Jeffrie's Triumphant, Goliath, Lord Liverpool, Topaz, Sir Walter Scot, Cassina, Hermoine, Rival Sussex, Rhoda, Burgundy, Beauty of Berkshire, Brown's Sarah, Vandyke, and Wilmer's Superba.

Fifth Prize.—Mr. James Burberry, Stoneleigh—Kelnor's Etonia, Girling's Topaz, Kingstone's Nimrod, Sir Edward Sudgen, Brown's Beauty, Grant Thornburn, Suffolk Hero, Maria Edgeworth, Dodd's Mary, Sir H. Fletcher, Cambridge Hero, Brown's Sarah, Day's Oxford Rival, Lord Stanley, Sussex Rival, Ansell's Unique, Barrat's Stuart Wortley, Springfield Major, Clarke's Julia, Conqueror of Europe, Blandina, Calliope, Addison, Bowmar's Premier,

Amateurs, twelve blooms. First Prize.—Mr. Searle—Knight's Victory, Squibb's Purple Perfection, Rhoda, Hope, Etonia, Royal Standard, Ruby, Jeffrie's Triumphant, Topaz, Suffolk Hero, Conductor, and Countess of Torrington.

Second Prize.—Mr. Foreman, Chellaston—Topaz, Marquis of Lothian, Summum Bonum, Knight's Victory, Dodd's Mary, Pandora, Brown's Beauty, Bontisholl, Jubilee, Simmond's Alpha, Lord Lyndhurst and Royal Standard.

Third Prize.—Mr. J. Burbury, Stoneleigh—Sussex Rival, Marquis of Lothian, Whale's Royal Standard, Dodd's Mary, Foster's Eva, Cambridge Hero, Conqueror of Europe, Widnall's Duke of Devonshire, Girling's Topaz, Widnall's Conductor, Maria Edgeworth, and Clark's Julia.

Fourth Prize.—Mr. J. Mussell, Mr. C. Retheram's gardener—Purple Perfection, Corrinne, Springfield, Duke of Devonshire, Dodd's Mary, Suffolk Hero, Squibb's Purple Perfection, Brown's Beauty, Sir H. Fletcher, Conqueror of Europe, Marquis of Lothian, and Dodd's Mary Queen of Scots,

Fifth Prize.—Mr. Thomas Taylor, Hinckley—Sir H. Fletcher, Dodd's Mary, Unknown, Rival Suffolk, Addison, Blandina, Perfection, Springfield Rival, Suffolk Hero, Perfection, Glory of the West, and Ruby.

Sixth Prize.—Mr. Hellier—Ruby, Napoleon, Springfield Rival, Mrs. Broadwood, Sir H. Fletcher, Dodd's Mary, Oxford Rival, Sam Weller, Allman's Grand Duke, Bath Rival, Day's Mary Anne, and Suffolk Hero.

Amateurs, six blooms. First Prize.—Mr. Searle—Suffolk Hero, Blandina, Knight's Victory, Topaz, Royal Standard, and Dodd's Mary,

Second Prize.—Mr. Hellier—Clio Perfecta, Suffolk Hero, Dodd's Mary, Sir H. Fletcher, Oxford Rival, and Beauty of the Grove.

Third Prize.—Rev. Mr. Cresswell, Radford, near Nottingham—Pandora, Bontisholl, Glory of the West, Beaumont's Premier, Royal Standard, and Suffolk Hero.

Fourth Prize.—Mr. Henney, Wolverhampton—Marquis of Lothian Suffolk Hero, Sir H. Fletcher, Independent, Middlesex Rival, and Brown's Beauty.

Fifth Prize.—Rev. Frederick Smith, Elmhurst—Dodd's Mary, Napoleon, Fisherton Rival, Springfield Rival, Topaz, and Conqueror of Europe.

Sixth Prize.—Mr. Mussell—Dodd's Mary, Topaz, Marquis of Lothian, Suffolk Hero, Foster's Hero, and Etonian.

Nurserymen, twenty four blooms. First Prize.—Premier Cup, Mr. Widnall, as above.

Second Prize—Mr. Brown, Slough—Royal Standard, Suffolk Hero, Topaz, Squibb's Purple Perfection, Conqueror of Europe, Jeffrie's Triumphant, Beauty of Berks, Maria Edgworth, Hope, Mrs. Wilkinson, Hero of Navarino, Metropolitan Yellow, Unique, Conductor, Eva, Marquis of Lothian, Dodd's Mary, Bontisholl, Robert Burns, Lady Kinnaird, Rienzi, Premier, Springfield Rival, and Rival Sussex.

Third Prize.—Mr. Hodges, Cheltenham—Dodd's Mary, Widnall's Conductor, Widnall's Duke of Devonshire, Royal Standard, Walo's Beauty of West Riding, Hope, Stamford's Perfection, Clio Perfecta, Rival Granta, Topaz, Springfield Major, Lady Dartmouth, Warminster Rival, Suffolk Hero, Bondicia Cormack's, Widnall's Rienzi, Rival Sussex, Widnall's Perfection, Foster's Eva, Girling's Ruby, Springfield Rival, Girling's Exquisite, Knight's Victory, and Ansell's Unique.

Fourth Prize.—Mr. Bates—Knight's Victory, Dodd's Mary, Marquis of Lothian, Countess of Torrington, Springfield Major, Foster's Eva, Duke of Rutland, Clio Perfecta, Squibb's Purple Perfection, Oxford Rival, Elphinstone's Purple Perfection, Ansell's Unique, Macket's Hellena, Suffolk Hero, Widnall's Livinia, Carmine Perfection, Jeffrie's Triumphant, Glory of the West, Ruby, Lady Vernon, Blandonia, Marquis of Northampton, Pandora, and Sir H. Fletcher.

Fifth Prize.—Messrs. Mountjoy and Son, Ealing, Middlesex—Sir F. Burdett, Springfield Major, Ne plus Ultra, Middlesex Rival, Ovid, Bontisholl, Clio Perfecta, Essex Rival, Sylvia, Jeffrie's Triumphant, Perfection, Squibb's Purple Perfection, Grant Thornburn, Springfield Rival, Dodd's Mary, Exquisite, Unique, Independent, Dodd's Queen of Scots, Harwood's Defiance, St. Leonard's Rival, Ruby, Conductor, and Rival Sussex.

Nurserymen's, twelve blooms. First Prize—Mr. Widnall—Widnall's Rienzi, Widnall's Conductor, Eva, Springfield Rival, Suffolk Hero, Topaz, Dodd's Mary, Ruby, Unique, Lady Kinnaird, Brown's Sarah, and Marquis of Lothian.

Second Prize.—Mr. Brown, Slough—Middlesex Rival, Conqueror of Europe, Rienzi, Beauty of Berks, Bontisholl, Unique, Oxford Rival, Lady Kinnaird, Bowling-green Rival, Eva, Topaz, and Sir H. Fletcher.

Third Prize.—Mr. Earl, Bristol road, Birmingham—Barratt's Hero of Wakefield, Barratt's Honourable Stewart Wortley, Beauty of Kingscote, Dodd's Mary, Widnall's Reliance, Widnall's Conductor, Springfield Rival, Brown's Corinna, Maria Edgworth, Widnall's Duke of Devonshire, Middlesex Rival, and Conqueror of Europe.

Fourth Prize,—Messrs. Mountjoy, and Son, Ealing,—Summum Bonum, Dodd's Mary, Middlesex Rival, Metropolitan Yellow, Jeffrie's Triumphant, Springfield Rival, Ansell's Unique, Bottisholl, Lord Byron, Addison and Ruby.

Fifth Prize—Mr. Wilmer, Sunbury, Middlesex,—Topaz, Heal's Glory, Dodd's Mary, Springfield Rival, Clio Perfecta, Widnall's Duke of Devonshire, Grant Thornburn, Holman's Scarlet Perfection, Bowman's Premier, Hope or Metropolitan Rose, Foster's Eva, and Riensi.

Seedlings. First Prize—Cup, Mr. Smith, Worcester.

Second Prize—Mr. Widnall.

Third Prize—Mr. Willmer.

Fourth Prize—Messrs. Brown, of Slough.

Fifth Prize—Mr. Widnall.

Sixth Prize—Mr. Willmer.

LIST OF NEW AND RARE PLANTS.

HYDROTANIA MELEAGRIS—From Mexico. It has the appearance of a *Tigridia* bearing the flower of a *Fritillaria*; the flower stem rises half a yard high, and the spathe contains four or five flowers, which are exceedingly fugitive, and extremely delicate, so as to scarcely bear touching, but being immersed in spirits of wine become tough, and like fine parchment; it has bloomed in the collection of John Rogers, Jun., Seven Oaks, Kent.

CYNOGLOSSUM GRANDIFLORUM—Seeds of which were sent from Bombay; it is an herbaceous plant, growing a yard high, producing upon the branching stems racemes of fine bright blue flowers edged with white, having a very pretty appearance.

MORRENIA ODORATA—From Buenos Ayres; in the greenhouse it blooms from July to September, it is a twining plant, the flowers having a resemblance to, and fragrance of *Pergularia odoratissima*; it has been introduced by the Hon. W. F. Strangeways.

CALYSTEGIA SEPIUM—From New Holland. Very much like the common large flowered Bindweed of this country, only the flowers are pink and somewhat larger; it has bloomed in the garden of the London Horticultural Society.

REPHERIA AURANTIACA—From New Holland. The flowers are rather small, of an orange yellow colour; it has been in bloom in the open border (in the garden of the London Horticultural Society) since the commencement of July.

PSORALEA CINEREA—An annual from New Holland. The flowers are rather small, of a purplish colour, not very interesting.

PRIMELEA CRINITA—From Swan River Colony. It has recently bloomed in the fine collection of Robert Mangles, Esq., Sunning Hill, Berks; the flowers are white, having something of the fragrance of the *Heliotropium*.

CAMPANULA CARPATICA ALBA. The well known showy blue flowered species, has now a rival in a white flowered hybrid, and when grown in contrast, would have a fine effect in the flower bed; every flower garden ought to have both kinds, and only growing from one to two feet high; it is recommended for any situation however exposed.

PENTSTEMON ANTWERPENSIS.—The whole plant in its foliage, spikes of flowers, &c., have much the resemblance of *P. verbatum*, (Synonym *Chelone barbata*) excepting the difference in colour of the blossoms, which in this new species are of a cream colour tinged with pale rose, and have a delicate appearance. There is also a variety with pure white blossoms of *P. barbatum* in flower at Mr. Young's, Epsom Nursery.

REFERENCE TO PLATE.

LILIAM SPECIOSUM. This very splendid flowering species was introduced into this country from Japan by Dr. Siebold. It is not only handsome on account of its clear deep rose coloured flowers which seem all rugged with rubies and garnets, and sparkling with crystal points, but has a very delightful fragrance. Kæmpfer said, when speaking of its excellence, that "it is magnificent in beauty."

The plant will flourish well if kept from the severity of winter, either in a cold pit or greenhouse. During the present summer we have seen splendid specimens growing in the open border in good situations. The finest we saw was in the conservatory of Messrs. Loddigen's. The flower stem rises from three to five feet high. It likes a light and rich loamy soil.

PENSTEMON HETEROPHYLLUM, various leaved. The late Mr. Douglass sent this pretty species from California. It is perfectly hardy and blooms from May to October. It has a somewhat shrubby appearance, and blooming so profusely has a very pretty effect. It deserves a place in every flower garden.

LOPHOSPERMUM SCANDENS. This is the proper species of that name, and not the *L. erubescens* which has adorned our gardens, &c. for the last seven years. The present species was introduced into this country in 1837. The plant is a profuse bloomer, and when grown in the open border, makes a pretty bush about half a yard high. It also blooms profusely when trained. The flowers are not of so bright a colour as the *L. erubescens*, but nevertheless showy.

FLORICULTURAL CALENDAR FOR OCTOBER.

PLANT STOVE—Plants of Cactuses that have been kept in the open air or greenhouse, now put into the stove, will bloom immediately.

GREENHOUSE-PLANTS.—Those plants that were removed into the greenhouse last month, should have plenty of air given them every mild day; but the lights should be close shut up at night, also when cold, damp, wet, or other bad weather prevails, excepting a little at the doors about the middle of the day. The plants should not be watered in the broad-cast manner, as it is termed, but should be attended to singly, so that no plant may be watered, but what is actually dry. To water in the evening is detrimental to the plants and ought to be avoided. Camellias, if wanted to flower early, should now be placed in a stove.

FLOWER GARDEN, &c.—Auriculas must now be removed to their winter quarters and all dead leaves picked off. Carnation layers potted off should be placed for protection during winter. Offsets of the herbaceous kinds of Calceolarias in beds or borders, should now be potted off. Cuttings of all greenhouse plants that have been grown in the open border, in beds, &c. such as *Heliotropes*, *Geraniums*, shrubby *Calceolarias*, should be taken off as early as possible in the month, and be struck in heat, in order to have a supply of beds, &c. the next year. Hyacinths and other bulbs, should be potted early in the month for forcing. Seeds of *Schizanthus*, *Stocks*, *Salpiglossis*, and similar kinds of plants wanted to bloom early next season, should be sown the first week in the month in pots, and be kept from frost during winter. Perennial and biennial flowers may be divided, and planted off where intended to bloom next year. A cover of soil round the roots should be given to Dahlias, lest a sudden frost coming should injure the crown buds. Seeds of all kinds of flowers not yet gathered, should be collected early in the month or they will be liable to injury by frost.



Plum speciosa



Lophoposidium maculatum

THE FLORICULTURAL CABINET,

NOVEMBER, 1st, 1838.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTURE OF THE DAHLIA

BY A DAHLIA GROWER.

No flower is in so universal estimation as the Dahlia, and whether we view its pure masses of varied foliage, the majestic mien of the plant, the size and symmetry of its flowers, or the brilliant and infinite variety of its splendid colours, as exemplified in the multitudinous varieties of it in cultivation, we cannot but acknowledge that it is richly worthy the esteem it has so fairly won from the British Floriculturist. In the neat little garden of the peasant or the gay parterre of the rich it finds a hearty welcome. Even the stupid inattentive mortals that walk on mother earth unmindful of her beauties and unmoved by all her rich garniture, tell us the Dahlia is a beautiful flower. Never for any other plant have we heard of £100 being subscribed for distribution of prizes as at Birmingham this season, to reward the best cultivators of this star of the earth. Who that can look with complacency on the Sun-flower, the Marigold, or China-aster, the favourites of our ancestors, will not rise into raptures at the sight of the best varieties of the Dahlia

But the object of this lucubration is not merely to laud the flower I so much admire, or sing its praises however justly they

they may be due, but to notice some particulars necessary to be attended to in the cultivation of this national favourite. I have been stimulated to send you this communication by the reflection that any thing however trifling that would tend to improve the cultivation of the Dahlia, would find a ready acceptance both with you and your numerous readers.

I wish, then, to direct the attention of your subscribers to a particular disease incident to the Dahlia and other plants, at the same time allow me to say, that were gardeners to pay more attention to the pathology of plants, sending you accounts of the causes and cures of the various diseases happening to these objects of their care, there would be fewer disappointments and greater perfection attained. In heavy soils the Dahlia is occasionally subject to the disease generally called "curl," the infant leaves as they are unfolded, are perforated with numerous holes, the margins of which are brownish as if burnt, they then become rigid, curled, and succulent, and the whole plant unhealthy and dwarfish. The principal stem almost ceases to increase in height, and numerous suckers and lateral branches rise from below, forming a dense bush, the summits of these growths, in their turn, also become diseased. The flowers of such plants, as might be expected, are small, irregular, and unsymmetrical, and however excellent the variety may be, they yield nothing but disappointment to the anxiously expectant cultivator. Kings and queens, dukes and lords, and the numerous gentry that show off their splendors in the Dahlia ground, will put on a mean ragged and most plebeian aspect, conferring no honour either on the cultivator, or the personages they represent. I have, for several years, been puzzled as to the cause of this disease. Loudon has afforded me no hint in his *Cyclopædia*, Paxton's *Treatise on the Dahlia* I have not seen, and as the complaint has become very general in this neighbourhood during the present season, I have attended more particularly to the disease. I find it to be occasioned by an insect, the *Cymix chloroterus* or green bug of Linnaeus; a transparent winged insect, about one-fourth of an inch in length, with a large proboscis generally folded under the thorax. It inhabits the extremities of the Dahlia, grows and feeds upon the under surface of the unexpanded and infantine leaves, thrusting down its long proboscis amongst those which are most tender; I find the same insect committing similar devastation on a variety of other plants the *Potentilla formosa*, *atrasanguinea*, and

Russeliana *Althea rosea*, even the herbs *Mentha viride*, and *Melissa officinalis* have not escaped its ravages. I have also caught it on terminal shoots of some species of *Prunus*. The same insect produces the curl in the potatoe, about the cause of which, so many volumes have been ignorantly and erroneously written. These insects are never numerous, two or three on one plant are amply sufficient to blast the hopes of the cultivator either of the Dahlia or any other of the numerous plants it infests. The best remedy, in my opinion for the above evil, is to look over the plants attentively every morning for a week and pick off the insects, if any are to be found. In doing which it is necessary to be careful, as the insect when disturbed by the approach of an enemy, instinctively throws itself down among the leaves and lower branches, and if again disturbed it precipitates itself to the ground. If it escapes the hands of the destroyer, it again climbs the stem or branch to its summit, and again commences its mischievous depredations: so that it is necessary for the gardener to exercise some tact, or he will fail in capturing his enemy. The insect in its pupa state, is without wings, and in both states it is exactly the colour of the foliage of the plant.

Several other insects inhabit the Dahlia in wet seasons, a small species of acarius infests the flowers. The *Cicoda spumaria* is not unfrequent on the Dahlia, in its pupa state it feeds upon the juices of the plant, and produces those frothy appearances vulgarly called cuckoo spit; the perfect insect is about the size of *Cymex*, from which, however, it may be easily distinguished by its brownish hue. A species of *aphis* is also common on the Dahlia covering the young shoots and sucking the juices of the plant through the pores of the epidermis; they may be distinguished from the *Cymex* by their being smaller, more numerous, and more sluggish in their habits.

The other insects that inhabit the Dahlia, I may perhaps notice in a future communication; but of all the insects that infest it, by far the most injurious is the *Cymex*, and I would advise your readers, who, doubtless are all Dahlia growers, and wish to grow it well, to be particularly on their guard against the attacks of this insidious and destructive enemy.

A CULTIVATOR OF THE DAHLIA.

Todmorden, Sept. 14th 1838.

ARTICLE II.

ON FACILITATING THE GERMINATION OF SEEDS.

BY ANICUS.

IODINE facilitates the germination of seeds much more than chlorine, if they be watered with a solution of it: even those which have apparently lost all vital power, may be frequently made to germinate by Iodine.—Sharon Turner's Sacred History of the World, Vol. I. p. 106, (might not this be useful with foreign seeds? Any chemist could give information as to the proper solution of Iodine for the purpose.)

The same work Vol. I. p. 108-9, mentions the following products, of foreign countries. Could any of them be naturalized in Great Britain? or if not there, in any of her colonies, so as to form articles of profitable commerce?

The *Myrica Pensylvanica* yields an annual supply of vegetable wax. M. Serret mentions it as a small arbuste, which may be easily cultivated in poor soils. From a surface of three hundred and fifty square feet he obtained every year from a pound and an half to two pounds of wax. Bull. Univ. 1829, p. 172. Humboldt also mentions a palm, the trunk of which was covered with a vegetable wax, which the natives employed for their tapers.

The Palo de Vaca in South America (gives a copious emission of actual milk. Humboldt found this tree in Venezuela. Lockhart met with many in Carraccas. One was an hundred feet high and seven in diameter. The milk was agreeable, and used by the inhabitants. Smith saw it on the river Demerary. It was there called *Hya Hya*. The milk was drinkable and rich; thicker than that of cows. It was not bitter, but a little viscuous, and mixed with coffee, it could not be distinguished with animal milk. Bull. Univ. 1830, p. 125, 295. Humboldt describes it as a handsome tree, resembling the broad leaved star-apple. Upon making incisions in the trunk, a glutinous milk issues abundantly of a pleasing and balmy smell, and it flows most copiously at sun-rise. It seemed peculiar to the Cordilleras of the coast.

Another tree in Guayaquil produces a fine wool. Ceibo wool is the product of a very high and tufted tree. The wool is contained in a pod near two inches long and an inch thick. It is a tuft like cotton, softer to the touch and of a reddish cast. Its filaments

are so fine that the natives think that it cannot be spun, and only use it to fill mattresses. Ulloa's Voyage to New Spain.

One in China secretes a tallow, like animal fat. This has lately been introduced into the Mauritius, and successfully cultivated. The tallow obtained from it is stated to be equal to that which is obtained from the fat of animals.

Mr. Ward exhibited to the Linnæan Society, a portion of the Lace-bark Tree of Jamaica (*Lagetta lintearia* of Jussieu). The tree grows on the high rocky hills of Jamaica, to the height of twenty feet: the bark is thick, and may be separated into twenty or thirty laminæ, white and like gauze. Caps, ruffles, &c. have been made out of this. Lit. Gaz. No. 791, March 17th 1831.

The *Tillandsia* of Buenos Ayres, yields on incision, a copious quantity of pure water, so good, that the woodmen in the forests never take any with them. They perforate the plant near the root, and the water gushes out as clear as crystal. From the fullest plants, about two quarts may be obtained. Andrew's Journey. This last might, perhaps, be introduced with advantage in climates resembling its own, and situations where water is not abundant. It is regretted that the references to the books quoted by Mr. Turner are so much abbreviated, and that the transcribers cannot add to them, any bookseller on a large scale, or other persons conversant with scientific works, would at once recognize those named.

AMICUS.

October 24th 1838.

ARTICLE III.

ON THE CULTURE OF THE HYACINTH IN BEDS OR POTS.

BY H. L. ISLINGTON.

I HASTEN to fulfil my promise by rendering an account of the method observed by many amateurs and florists in cultivating Hyacinths in beds and pots, and which is adopted by me as being the most preferable. The observations I am about to offer thereon, should be as succinct as the subject admits, and be strictly confined to practical results, for mere theoretical statements in this, as in nearly all other matters, bewilder rather than instruct. Being an enthusiastic admirer of the flower, I have taken no ordi-

mary pains to produce a good bloom, and can, therefore, the more confidently suggest a few hints respecting the culture of it. It has always appeared to me, as well as to many with whom I have conversed upon the subject, to be a matter of regret that comparatively so little attention should be bestowed on this flower: the Tulip has numerous fanciers, and so have Carnations and Auriculas, whilst the Hyacinth, though not inferior in beauty seems as to blooming it in beds to be too generally neglected, and yet a more beautiful object amongst all those which attract the eye in a flower garden is rarely seen, the effect produced by a glance at an assemblage of so beautiful a flower, especially when well arranged, is dazzling, and a close inspection will be found to increase the gratification derived therefrom, added to which the fragrance emitted by them is peculiarly sweet, and is not surpassed by the Mignonette or the Tuberose.

The most eligible part of a garden for a bed is that with a southern aspect, and considerably distant from trees and large shrubs, as the droppings to which plants beneath are subjected, prove extremely prejudicial; the season for planting is during this and the following month, the precise time being indicated by the appearance of the root itself, which I noticed in my remarks that were inserted in the last Number, a repetition of it therefore is unnecessary. The portion appropriated should be excavated to the depth of about two feet, the earth at the bottom loosened and rendered fine to about six inches deeper, and then raked smooth, this process will take but little time, and may be attended with advantage, the hollow should then be filled with the following compost, one-third of good garden earth, one-third of sea or river sand, as coarse as can be obtained; one-fourth rotten dung, about three years old: and the remainder vegetable mould.

The earth used in the compost will require minute examination, in order that vermin may be exterminated, of which the most destructive, and the most likely to elude detection, is the yellow wire-worm.

When preparing the compost, let its several parts be well mixed, this should be performed, a few weeks before it is needed, and will require turning over several times. After the bed is filled up add more compost till it is raised three or four inches above the walk in front, and let the height of the back part be an additional six inches, so as to form a slope to the south, a layer of sea or river sand, one inch thick, should be spread over the sur-

face, and if a tasteful arrangement be desired, the place for each bulb should be marked thereon, the following order appears the most natural, and has decidedly the best effect. Let the rows be six in number, and eight inches apart, and allow the same distance between the bulbs, and four inches from the four outer rows to the limits of the bed. On the layer of sand in the places appropriated to them, let the bulbs stand in the following position throughout; red, blue, white, red, &c. commencing with a red in the first row, and in the second with a white, which place under a supposed point equi-distant from the red and blue above it; the next root will consequently be a red, and under the point between the blue and the white; in the third row begin with a red as in the first, and let it be directly under the red, in that row the blue following it, will be beneath the white and red of the second row; the fourth row will commence with a white as the second, and be directly under it; the red in the next place will be under the blue and white of the third row, &c. This mode allows the greatest possible diversity, and each bulb except the outer ones will be in the centre of a hexagon. In this arrangement yellow Hyacinths may be considered as white. Then cover them with a mixture of fresh earth and sand three or four inches deep, the latter depth is the proper one for the earlier roots, as it will retard their progress, so as to bloom with the later ones, an attention to this is requisite to ensure all blooming together. When covered the bed will be completed, and if boarded on the sides, will add much to the neatness of it, or if preferred, brick-work may be substituted, and hoops placed over the beds, will be useful, as mats can be thrown over the beds, during severe frosts or heavy rains, but for slight frosts, as the Hyacinth is hardy, no covering is necessary, and rain when not violent, is beneficial; the autumnal rains are, except in very dry seasons, sufficiently copious to obviate the necessity of artificial watering.

A few bulbs or reserves should be planted in pots at the proper time, and plunged in order to supply deficiencies that may occur; for some bulbs whose appearance indicate no symptoms of decay, are rotten at heart.

As all the directions to be observed in planting has been enumerated, it is unnecessary to add more now; I shall, however, in the next, or in the January Number, resume the subject, and a few words on blooming Hyacinths in pots, shall close this article.

If it be intended to have the pots in the drawing room, it need only be observed, that an attention to watering them as often as is necessary to retain the moisture, and their preservation from severe frosts, is all that is required; but if for growing out of doors, it will be proper to plunge them, and this may be done in the ordinary way, by placing the roots three or four inches asunder, then filling up the interval between, and afterwards covering them from six inches to a foot until the return of spring, but the greatest care must be previously taken to examine the earth otherwise though but a single wire worm, or other noxious vermin remains, the roots are in jeopardy. Or another and much safer method may be adopted, instead of earth, let cinder ashes be substituted in its stead, they can be purchased of the sweeps for 3d. per bushel: place the pots on layers of these six inches thick, fill up the space between, and cover them as mentioned above; by this means no insect can approach the pot, so that if the compost in which the bulbs are planted be free from them, no injury need be apprehended; they will now be safely lodged in their winter quarters, and I shall not omit to refer to them in my next communication.

In the above remarks I have endeavoured to be explicit, and I hope the prolixity of them will not be objectionable. As also in my paper of blooming Hyacinths in glasses in the last Number of the Floricultural Cabinet, no direction is given that has not been subjected to the test of practice, as no doubt yourself and many of your readers can avouch.

H. L.

ARTICLE IV.

A LIST OF TULIPS SUITED TO GROW FOR SHOWING AT FLORAL EXHIBITIONS.

BY MR. JOHN SLATER, BROUGHTON, NEAR MANCHESTER.

HAVING been applied to by several of your readers for a list of Tulips calculated for an exhibition, I send you a catalogue of those grown here for that purpose.

JOHN SLATER,

N. B. Those tied together by a brace is considered the same.

Roses.

Dolittle, or
 Michael de Lise }
 Blanca or }
 Rose Blanca }
 Claudianus
 Compte de Vergennes
 Hero of the Nile
 La Vandikken
 Lady Crewe
 Ponceau Brilliant }
 Moore's Rose, or }
 Cerise Royal }
 Pretiosa or }
 Thunderbolt }
 Queen Boadicea or }
 Duchess of Newcastle }
 Roi de Cerise
 Rose Quarto
 Unique
 Vesta
 Triomphe Royale or }
 Heroine }
 Thalestris
 Turner's Lord Hill
 Vulcan or
 Crassimi
 Wallworth

Bizarres

Albion
 Black Prince
 Captain White
 San Joe or }
 Abercromby. }
 Catafalque (Old Dutch)
 superieure
 surpasse
 Cato
 Charbonnier Noix
 Charles X.
 Coggeshall Hero
 Crown Prince
 Duc de Savoy
 Earl St. Vincent
 Firebrand
 Vol. VI. No. 69.

George IV. (Page's)

Gould Beurs
 Gould Mont
 Leopoldina
 La Cantique
 Lustre de Beauté
 Liberty
 Polyphemus
 Platoff
 Surpasse la Cantique
 Sir Sidney Smith
 Magnum Bonum }
 or Thebisonde }
 Trafalgar

Byblomens.

Alexander Magnus
 Ambassador van Holland
 Archduke Charles
 Archelaus
 Atlas or }
 Bacchus No 1. }
 Black Baquet
 Bienfait
 Buckley's Smiling Beauty
 Lancashire Hero
 Fair Flora
 Cleopatra
 David or }
 David Pourpre }
 Duchess of Tuscany
 Grotius,
 Gadsby's Magnificent.
 Imperatrix Forum
 Imperatrice de Morocq
 de Romaine
 Incomparable, (Rowbottoms)
 Premier Noble
 Surpassant
 Louis XVI.
 Maitre Partout
 Prince Wirtenberg
 Princess Charlotte
 Queen Charlotte
 Reine de Sheba
 Sable Rex
 vv

Sang du Bæut
Triumph de Lisle
Violet Alexander
..... a son Noir
..... Extra
..... Wallers
Washington

Selfs.

Roi Min d'or
White Flag

Rose Breeders.

Duchess of Newcastle
Lady Crewe

Glaphyra

Bizarre Breeders.

Old Dutch Catafalque
Cato
Charbonnier Noir
Polyphemus

Byblomen.

Lancashire Hero
Smiling Beauty
Violet Alexander
Amy Robsart

New varieties exhibited this year.—Sir Thomas, Bizarre, won four premier Prizes this year; Lady of the Lake, Byblomen, like Roi de Siam; Sancta Sophia, Byblomen, like violet Alexander; Hannibal, Flamed Bizarre; Euclid, Feathered Bizarre, &c. &c. &c.

ARTICLE V.

REMARKS ON THE ROSE.

(Continued from page 232.)

MANY persons eat this fruit with pleasure when mellowed by the frost. It was formerly much used as a conserve, the seeds being taken out, and the pulp beaten with sugar. Gerrard says, "The fruit when it is ripe, maketh most pleasant meates, and banquetting dishes, as tartes, and such like."

The fruit of the rose is nothing more than fleshy urceolate calyx, from whence the stigma springs, and it afterwards becomes the repository of the true fruit or seed, after the manner of the fig, excepting that the seeds of the hip, are divided by silky bristles, or prickly fibres, which cause great irritation on the primæ viæ when eaten.

It is the strong shoots of this species of rose-tree that the largest kind of garden roses are now grafted on; and by this means

we see, instead of bushes, tall stems growing out a-head, in imitation of the forest trees. Where it is desirable to raise them to a height above dwarf bushes, it has a good effect; as also when planted in flower gardens, as pinks and other flowers may cover the ground with blossoms, whilst the rose form a kind of parasol over them; but in general we prefer a rose bush to a tree of roses, and are better pleased to look into a rose than up to it. De-lille notices this modern practice with that of keeping apple trees in a dwarf state.

“ Of old the rose on lowly bramble sprung,
While high in air the ruddy apple hung !
Now, strange reverse ! the rose-tree fills the skies,
While scarce from earth our apple trees arise.”

The white field rose, *Rosa arvensis*, is commonly called the White Dog-rose. This is much less fragrant than the last mentioned. As the fruit of this kind ripens, it changes from an oblong into a globose shape. The style of the flower, as soon as they have passed through the neck of the calyx, are compacted into a cylinder, resembling a single style, terminated by a knob composed of the stigmas, which distinguish it from the other species. It is said to be the most common rose in the west of Yorkshire, and is generally mentioned as the rebel rose.

A young English lady appearing in company in Paris, with a sprig of orange flowers in her bosom, was thus complimented by a Frenchman for the clearness of her complexion, at the same time, that he gave her a delicate hint that her bosom was more exposed than modesty allowed.

“ Lovely Tory, why the jest,
Of wearing orange in thy breast ?
Since this breast so clearly shows
The whiteness of the rebel rose.”

That both the white and the red rose were formerly considered rebellious emblems, the blood of our ancestors has fully proved.

“ And here I prophesy—This brawl to day
Grown to this faction, in the Temple garden,
Shall send, between the red rose and the white,
A thousand souls to death and deadly night.”

SHAKESPEARE.

The idea of taking a white or a red rose, as an ensign for the parties who caused such dreadful devastation in this country for many ages, seems to have originated in the Temple Gardens of London, if we may trust to poetical history, that says in King Henry the Sixth,

“ Within the Temple hall we were too loud ;
The garden here is more convenient

From the year 1454, until the families were united in 1485, civil war laid waste the fairest portion of our country, and the sons of one father often engaged in battle, and sometimes the father against the son, under the different banners of the red and white rose.

In times of terror, fear and superstition are generally seen hand in hand. During these ages of domestic wars, we are told they discovered a rose tree at Longleat, which bore white flowers on one side and red ones on the other side, prognosticating both the division and uniting of the two families.

It was pretended upon the marriage of Henry the Seventh, to Elizabeth, the daughter of Edward the Fourth, that the rose first appeared with mixed petals of red and white, which is still acknowledged throughout Europe as the emblem of that happy union, by the name of York, and Lancaster Rose.”

Gerrard tells us that the double white rose formerly grew wild in the hedges of Lancashire, in great abundance as briars. This we presume was the white dog rose which had become double by some accidental circumstance, and that the variety propagated itself by suckers and layers, in a soil that was suitable for that purpose.

“ The sweetest rose where all are roses.”

The most delightful rose of which the garden boasts is the Provence, or provins rose, *Rosa provincialis*, and which has been claimed by the inhabitants of the south of France as a native of Provence; whilst the Dutch, says Gerrard, consider themselves entitled to this flower, and say, as it first came out of Holland, it ought to have been named the Holland Rose, and not Provence rose; but it appears very evidently from Pliny, that neither of these countries can justly hold it as a native plant. He calls it a Greek rose, and thus describes it in the fourth chapter of his twenty-first book, The rose named *Græcula*, has its petals

or flower leaves folded or lapped over each other so closely, that they will not open of themselves, unless they be forced with the fingers, and therefore look as if they were always in the bud, but when they are expanded, they are the largest of all the roses," This account correctly corresponds with the nature of the Provence rose, which is often called the Cabbage rose, from the manner in which the petals cabbage or fold over each other. As this rose is so nearly allied to the damask rose, it is probable the Greeks first obtained it from the vicinity of Damascus, and that the trivial change is owing to soil and cultivation.

(To be continued.)

ON THE GERANIUM HOUSE.

BY AN AMATEUR.

HAVING perused the following article with great satisfaction and pleasure, I consider it well worthy the attention of those who delight in the culture of that most beautiful flower the Geranium, I have transcribed it and sent it to you, which if you think worthy of a place in your valuable Publication, it will be, no doubt, both instructive and entertaining to many of your readers.

"The late Mr. Colville was amongst the first who saw the propriety and adopted the practice of growing the *Geraniaceæ* in a house by themselves. Since that time many have followed the example, and, judging from the fine specimens brought to the public exhibitions within these last three years, we are led to think that in no department of plant culture has such a rapid improvement been made as in that of Pelargoniums. To grow these numerous and splendid plants to perfection, requires a separate house for themselves, and whoever have seen those of Catleugh, of Chelsca, and Gaines, of Battersca, as public cultivators, and those of Sir John Broughton, or R. Jenkinson, Esq., will admit, we think, that they richly deserve a house for themselves. The *Geraniaceæ* have the following attractions, namely, they are easily kept, propagated, and flowered; they continue nearly the whole season in bloom; present almost infinite variety of colour and form, and are much better adapted for standing in rooms uninjured than most other plants. New varieties are readily obtained by cross impregnation, and these are readily in-

creased by cuttings, the simplest of all modes of re-production. If the majority of Pelargoniums are deficient in fragrance, nature has made up for that apparent deficiency, by the splendour of the blossoms; and, as it were, to equalise her gifts, certain kinds whose flowers are less showy, nay, even of a dingy hue, have a delightful perfume; some during the evening and night, and others when rubbed against, or when the wind lashes the leaves and branches against each other.

Few genera of plants exhibit more fully the industry of the cultivator, or demonstrate more clearly the control he exercises in producing varieties, than in the case of the Geranium or Pelargonium. Hundreds of varieties, which are to be met with in the collections of florists, are the fruits of his ingenuity; for, however strange it may appear, it is a positive fact that not above a dozen true species are to be recognised amongst them. It is, therefore, now only in the strictly botanical collections that true species are to be seen, they having given place to sub-species originated by hybridizing. With the exception of three or four species, the whole of this splendid tribe, amounting to nearly three hundred recorded species, and above five hundred sub-varieties, have been either introduced or originated in this country within the last fifty or sixty years.

Structures calculated for the Growth of Geraniaceæ.

“An ordinary greenhouse, not too lofty, and capable of being completely ventilated, and situated in full exposure to the meridian sun, will answer very well for the culture of this tribe. As the plants of this family require all the light, air, and sun, that our climate affords, it is necessary that the Geranium house should front the south, and be perfectly free from the shade of trees or buildings.

A very complete Geranium house may be upon the same scale of size, and constructed as that recommended for a Heathery, and may be attached to it, thus forming a pretty range, which in consequence of the plants being for the most parts natives of the same country, will associate well together; or the Geranium house may be erected against the Camellia house, providing that the latter be detached from the dwelling house, and occupying the north aspect of a separate wall. One remark we shall here make respecting the erection of plant houses in which small plants are to be cultivated.

Heaths, Geraniums, and most fine flowering greenhouse plants, should never be allowed to become old or large, as such plants, for the most part, do not flower so fine or look so well, as young plants do. Houses of this description should be rather long and narrow, because in that case the plants are more within reach, and are much better seen than when they are placed too far from the eye, which they often are when the house is either too lofty or too wide.

This would be a very complete Geranium house, and would be an object both light and elegant in the flower garden if placed detached from other buildings, or it would be equally well placed if more desirable, when attached to the dwelling by one of its ends. The height of such a house should not exceed seven feet over the foot paths, which will be sufficient to admit of a free passage; for the lower such houses are, the better, so that there be plenty of head room. The length of all plant houses must be determined by local circumstances; but so far as heating is concerned, and we think it proper to mention that here, one fire, whether employed to heat a boiler of water or warm the smoke flues, will heat a house of this width and height, above one hundred feet in length. A span-roofed house we prefer for Geraniums, as the plants enjoy plenty of air, light, and solar influence, and are seen to great advantage. A span-roofed house similar to the above statement, if fifty feet in length, will contain nearly as many plants as one in the lean-to fashion of one hundred feet in length; and in regard to expense of erection will be much less.

In speaking of shading the most delicate heaths during the heat of summer, we would also recommend the same provision to be used for the Geranium house, while the plants are in bloom. The expense will be amply remunerated by the greater length of time the plants will remain in bloom, and the richness of the colours of the flowers, which, if exposed to the full solar influence, would be very much injured. The upright lights over the parapet walls should be made to take out, as during the great part of the season they will be better removed, in order that a free circulation of air be permitted to pass through the house; but they should be replaced in stormy, windy weather. This mode of ventilation will render the opening the roof seldom necessary, guarding also against sudden showers of rain, which would be very injurious to the finest flowers.

Propagation and treatment while young.

“Geraniums or, more properly, Pelargoniums, are very readily propagated by cuttings and seed, and the tuberous-rooted sorts by cuttings or pieces of the roots. To have a succession of flowering plants all the year, some attention should be paid to the period of flowering of different sorts, which a reference to Loudon's Hortus Britannicus, and also the period at which the cuttings are planted, will sufficiently indicate. The following routine we have been satisfied with following, viz., in August, at which period the earlier flowering kinds will have done flowering, the plants are cut down to within one or two eyes, if we may so speak; but which will be more intelligible if we say to within from an inch to half an inch of where the shoot sprung from. The shoots so taken off, are made into cuttings about six inches long, and cut close off below a joint, but the leaves should remain on, and not reduced in size, as is too often done. Each cutting is then planted in a pot of the size called large thumbs, and which are about two inches in diameter. They are then well watered, and plunged into a moderate hot-bed, kept close and well shaded, till they have begun to take root, when air is gradually admitted to them. The only care necessary during this part of their culture is to pick off all decayed leaves, to prevent the cuttings from rotting, to keep the temperature steady, but not too high, and above all to keep them shaded. In four or five weeks cuttings so treated will require to be shifted into larger pots of the size known as thirty-twos, after which the plants may be placed in a cool, airy pit, or frame, but kept close to the glass to prevent their being drawn up weak and tall; or they may at once be arranged in the Geranium house. Plants so treated will flower in March if they are removed to the Geranium house before the setting in of severe frost.

“In September, another set of cuttings should be put in, of the sorts that go out of flower at that period; these will flower in May, and a third set of cuttings should be put in, in January, which will flower from May to July; and a fourth and last set in March, which will produce plants that, if kept cool during summer, and brought into the Geranium house in September, will bloom during October, November, and part of December.

(To be continued.)

R E V I E W .

The Rose Fancier's Manual.—By Mrs. Gore. 12mo, pp.431
London, 1838.

(Continued from page 235.)

The first article in the body of this work is on the geography of Roses. Certain authors assign the provinces of Georgia and Circassia as the native places of the older Roses; and others assert that the Rose only flourishes between latitudes 20 and 70 degrees; but the Rose of Montezuma, which grows in latitude 19 degrees, and the Abyssinian rose, which inhabits latitude 10 degrees, overturn this theory. Various countries possess species or varieties which are peculiar to them.

"Of these, some extend their growth to [over] a province, some to a smaller space of territory; some even restrict themselves to a single mountain or solitary rock. The *Rosa Polliniana* is peculiar to Mount Baldo, in Italy; the *Rosa Lyonii*, to Tennessee, in North America; while the *Rosa arvensis*, or field rose, is to be found in all countries of Europe; and the *Rosa canina*, or dog rose in Europe, as well as a considerable portion of Asia and America.

"The roses of North America, are:—*R. blanda*, found on the glaciers of the most northerly provinces; its bright pink corolla unfolding itself immediately on the melting of the snows. This shrub is found only on the frozen deserts between 70° and 75° N. L. *R. hudsonensis* is found on the shores of the Hudson, within the polar circle, where it produces clusters of pale double flowers. *R. fraxinifolia*, which has small, red, heart-shaped petals, is found in Newfoundland and Labrador, along with *R. blanda*. *R. nitida*, which has deep red flowers, abounds on the northern coasts, and is used by the Esquimaux for decorating their hair, and their seal-skin dresses. *R. lucida* is found in the marshes of Carolina. *R. Woodsi* is found on the banks of the Missouri; and *R. carolina* on the adjoining marshes. *R. evratina* is found on the marshy banks of the rivulets of Virginia, and is extremely difficult of culture in gardens. *R. diffusa* is found in the forests and stony districts of the central and southern states of the Union. *R. perviflora* is a diminutive shrub, found on the rising grounds of Pennsylvania; and *R. stricta*, and *R. rubifolia* are found on the outskirts of the Pennsylvanian forests. *R. setigera* is found in South Carolina; and *R. laevigata*, a climbing species, inhabits the woods of Georgia, and is used by the Creoles to adorn their hair.

"The rose of Mexico is *R. Montezumæ*, a sweet scented thornless species, which abounds on the highest parts of Cerro Ventoso, near San Pedro in Mexico, where it was discovered by Messrs. Humboldt and Bonpland. The town of San Pedro is in latitude 19°; which proves that roses are found under latitude 20°, contrary to the assertion of some authors. The total number of American species of roses hitherto described is only fourteen, all of which, with the exception of *R. Montezumæ* and *R. stricta*, might be classed under the same section as the European *Rosa cinnamomea*. Those of France are twenty-four, and of Britain nearly that number, according to some botanists, and not more than six, according to others.

"Asia has to boast a greater variety of species of the rose than the rest of the earth united; thirty nine that admit of accurate definition having been

already established. Of these, the vast empire of China, where both agriculture and horticulture are arts in high estimation, has a claim to fifteen.

"First, the *Rosa semperflorens*, the leaves of which have sometimes three leaflets, sometimes only one; whose flowers are scentless, of a pale dull pink producing a pleasing effect when half blown. The *Rosa sinensis*, confounded by some botanists with the preceding, but blowing at all seasons, of a far more brilliant colour. The *Rosa Laurenceana* is a beautiful little shrub, from 3in. to 5in. in height, but, unlike most dwarfs, whether of the vegetable or animal creation, perfect in symmetry and proportion. The *R. multiflora* attains, on the contrary, a growth of 15 or 16 feet, having small, double, pale pink blossoms, united on a single stem, so as to form beautiful bouquets on the tree. The *R. Banksian* extends its flexile branches over rocks and hillocks, bearing a profusion of small, very double, yellowish white flowers, remarkable for their violet-scented fragrance.

"The *R. microphylla* is a favourite garden shrub of the Chinese, under the name of *Haitong hong*, having small, double, pale pink flowers, and a foliage of peculiar delicacy.

"Cochin-China, situated between the 10th and 20th degrees of latitude, possesses all the roses of China, and, in addition, several indigenous species; among others, the *R. alba*, found also in Piedmont, in France, and various other parts of Europe; and the *R. spinosissima*, bearing flesh colored flowers. Japan, between the 30th and 40th degrees of latitude, has all the roses of China, besides a peculiar species, the *R. rugosa*, the solitary flower of which bears some resemblance to the *Kamsteckatten* rose.

"The southern provinces of Asia, comprehending those of India, offer many curious species to our own observation. The north of Hindostan possesses six; two of which are also found in China, and two in Nepal. The *R. Lyellii*, which bears transplantation to our own climate, and is remarkable for the profusion of its milk white flowers during the greater part of the summer, and the *R. Brunonii*, whose petals are of the same snowy whiteness, rank high among the roses of India. In approaching the southern provinces, we find the *R. macropphylla*, somewhat resembling the alpine roses of Europe, the flowers whitish, but streaked with pink towards the extremity of the petals; the *R. sericea*, of which the surface of the leaflets has a satin texture, and the flowers are solitary and drooping.

"The parched shores of the Golt of Bengal are covered during the spring, with a beautiful white rose, found also in China and Nepal. The flowers of the *R. involucreta* are white, solitary surrounded with a collar of three or four leaves, out of which they seem to emerge; while in vast thickets of the beautiful *R. semperflorens* (a native also of China) the tigers of Bengal and crocodiles of the Ganges are known to be in wait for their prey.

"In the gardens of the Kandahar, Samarcand, and Ispahan, the *R. arborea* is cultivated in great profusion by the Persians. This shrub which attains a considerable size, is covered during the spring with an abundance of white and scented blossoms. The *R. berberifolia* is also common in these provinces. This shrub differing so completely from every other species of rose that botanists experience some hesitation in classing it among the number [it is now *Loisea berberifolia*, see *Arb. Brit.*, ii. p. 812], has simple single leaves, and yellow star shaped flowers, variegated like a cistus, at the base with spots of deep crimson. The *R. damascena*, transported to Europe from Damascus by the Crusaders, affording to our gardens an infinite number of beautiful varieties, adorns the sandy deserts of Syria with its sweet and brightly tinted flowers. At the extremity of Asia, towards Constantinople, the *R. sulphurea* displays its very double flowers of a brilliant yellow.

"The north-west of Asia, which has been signalised as the father land of the rose tree, introduces to our admiration the *R. centifolia*, the most esteemed of all, and celebrated by poets of every age and country, with which the fair Georgians and Circassians adorn their persons.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

1. **CORYCIUM OROBANCHOIDES.** Synonym **SATYRIUM OROBANCHOIDES.** *Broomrape Corycium* (Bot. Reg. 45.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

It is a terrestrial Orchidææ, and a native of the sandy plains of the Cape of Good Hope. It is very probable that the plant which has recently bloomed in the collection of John Rogers, Jun. Esq., Streatham, Surrey, is the first that bloomed in Europe.

The flowers are small, produced in a spike, which rises about six inches high. The flower is a pale yellow having the end of the petal a reddish-purple. *Corycium*, from *korukos*, a little bag, attending to the form of the flower.

2. **CYRTOCHILUM MACULATUM.** *Spotted flowered.* Bot. Reg. 34.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native near to Vera Cruz. It has bloomed in the London Horticultural Society's Garden. The scape of flowers rises above a foot high, bearing from eight to ten blossoms, each of which is about an inch and a quarter across. The petals are of a yellowish green, beautifully spotted with brownish purple. The labellum is white at the base, but yellow towards the termination, having the edge tinged with carmine. The entire plant has very much the appearance of an *Oncidium*.

3. **LOBELIA BRIDGESII,** *Mr. Bridge's* (Bot. Mag. 3671-

LOBELIACEÆ. PENTANDRIA MONOGYNIA.

A native of Chili, where it was discovered by Mr. Rodges. Seeds of it were received by W. T. Aiton, Esq. and the plant bloomed in the greenhouse at Kew, in 1837. The plant grows to about four feet high, having a raceme of its beautiful blossoms, each of which is near two inches long. It is a very desirous species, and doubtless will be a very ornamental plant for the greenhouse or conservatory.

4. **MAXILARIA ROLLISINIA.** *Messrs. Rollison's Maxilaria.* (Bot. Reg. 40.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native of Brazil, imported from thence by Messrs. Rollison's of Tooting. The plant is very dwarf. The flower stem extends about two inches long, terminating with a flower about an inch and an half across. Petals of a pale yellow. Labellum, yellow, with bland coloured spots.

5. CRUCIANELLA STYLOSA. *Long-styled.* (Bot. Reg. 55.)

CRUCIANELLA, PENTANDRIA MONOGYNIA.

This pretty flowering herbaceous plant was discovered by the Russians in Persia, growing upon rocks among the mountains. The flower stems rise about half a yard high, each terminates with a head of bright pink flowers, which are very ornamental. The plant seems well adapted for growing en masse, a bed of it would make a beautiful show. It blooms from June to September,

6. EPIDENDRUM SCHOMBURGKII. *Mr. Schomburgk's ?* (Bot. Reg. 53.)

ORCHACEÆ. GYNANDRIA MONOGYNIA.

This beautiful flowering species was discovered by Mr. Schomburgk in the interior of British Guayana. The flowers are produced in panicles of ten or twelve on each, they are of a fine brilliant vermilion red colour, similar to the *Lychnis Bungeana*. Each flower is about two inches across. The plant has bloomed in the collection of Messrs. Loddiges's of Hackney.

7. DAPHNE AUSTRALIS. *Southern Daphne.* (Bot. Reg. 56.)

• THYMALACEÆ. OCTANDRIA MONOGYNIA.

A native of Italy near Naples. It has much the appearance of *Daphne collina*, but has more hairy foliage. The flowers are of a rosy purple colour, highly transparent. It seems to be perfectly hardy in this country, and well deserves a place in the shrubbery,

8. HELLEBORUS LIVIEUS. *Corsican Hellebore.* Bot. Reg. 54.

RANUNCULACEÆ. POLANDRIA, POLYGYNIA.

A native of Corsica. It is a hardy herbaceous plant, producing erect racemes of greenish yellow flowers, each flower being about two inches across.

9. IBOMEA PLATENSIS. *The Plata Ipomœa.* (Bot. Mag. 36x5.)

CONVOLVULACEÆ. PENTANDRIA, MONOGYNIA.

A native of the banks of the Plata River. As is so common in the genus, it is long and climbing, bearing umbels of from two to four flowers in each. The flower is of a delicate lilac colour, having a darker eye. It is a pretty hot-house climber, blooming for several months successively.

10. SOLANUM FRAGRANS. *Transparent North American Nightshade.* (Bot. Mag. 36x4.)

SOLANÆÆ. PENTANDRIA MONOGYNIA.

A native of south Brazil, from whence Mr. Tweedie sent it to the Glasgow Botanic Garden, where it has recently bloomed. It grew rapidly in a pot in the stove for the first two years, but showed no disposition to bloom. It was then planted in the border in the great stove, where it soon reached the height of twelve feet, and produced numerous racemes of its changeable coloured flowers, having a powerful fragrance. The raceme is about five inches long, having ten or twelve flowers on each. The corolla at first is of a bluish-purple, changing to a brown, and ultimately to a greenish yellow, with a dark streak on each petal. The flower is about an inch across.

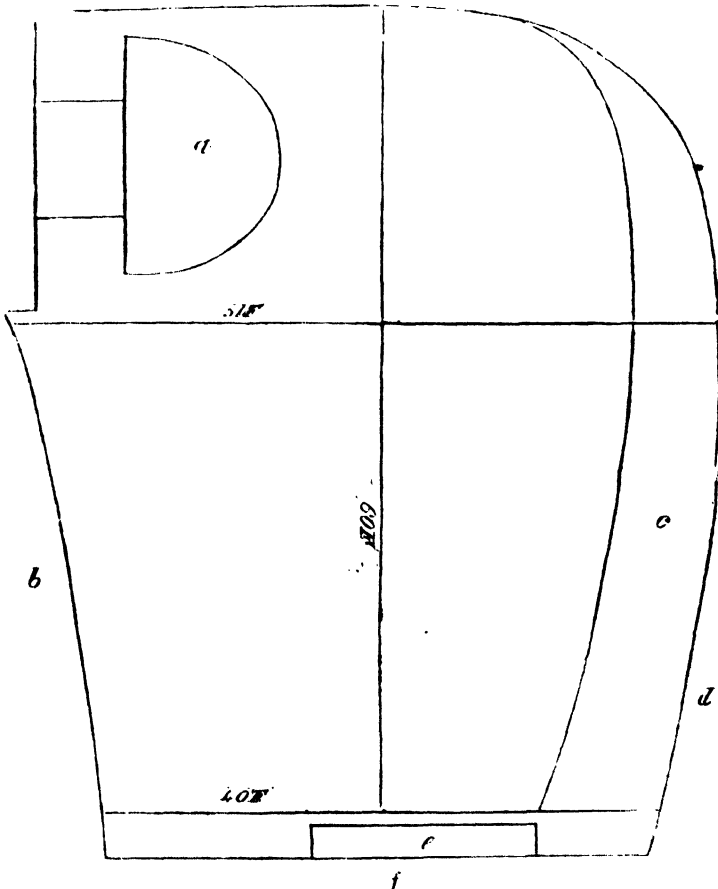
PART III. MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A PLAN FOR A FLOWER GARDEN, WITH LIST OF PLANTS SUITABLE. — A Regular Subscriber to the Floricultural Cabinet would be much obliged if some correspondent would, as early as convenient, give among the plans of Flower Gardens, one for laying out ground of the annexed form and dimensions; also a suitable list of plants, say Annuals, Biennials and Perennials, herbaceous and greenhouse plants for summer ornament would be an additional favour.

Aug. 27th, 1838.

A REGULAR SUBSCRIBER.



a, A small Greenhouse. *b*, High wall to be covered with clay. *c*, Shrubs concealing the garden from the drive to the house. *d*, Ornamental wire fence, enclosing the garden. *e*, Large window. *f*, End of the House.

ON A LIST OF MICHAELMAS ASTERS, AND SOLIDAGOS.—Few plants are more ornamental for adorning the Flower Garden and Shrubbery in Autumn, than the Michaelmas Aster, and Solidagos. The present period of the year being the blooming season, affords an opportunity to ascertain which are the most showy and ornamental sorts. If some reader of the Cabinet, having the opportunity, would furnish such a list, it would very much oblige

Sep. 26th, 1838.

A CORRESPONDENT.

REMARKS.

NEW OR RARE PLANTS.

ARTHROSTEMMA VERSICOLOR. Changeable flowered. (Synonym. *Rhexia versicolor*).—A native of Brazil, discovered by Mr. McRae. It has flowered in the stove at the Glasgow Botanic Garden. The plant grows near a foot high, and terminates in large spreading panicles of flowers, which are of a pale-rose colour, and being produced numerous, have a pretty appearance. Each flower is about three quarters of an inch across.

PENTSTEMON ARGUTUM.—Another fine species of this admired genus. We recently saw it in bloom at Mr. Henderson's Nursery, Edgware Road, London. The flower stem rises about five feet high, having numerous lateral shoots, its whole length producing a profusion of flowers, of a rosy purple colour. Each blossom is about an inch and a half long. It deserves a place in every flower garden.

At Lowe, and Co.'s Nursery, Clapton, we saw the following.

GLOXINIA MAXIMA. The flowers are of an extraordinary size, white with a deep purple along the lower part of the corolla inside, producing a fine effect. It is an hybrid production recently raised, we understood, in the neighbourhood of London by a gentleman's gardener.

FICUS CYLINDRICA. The appearance of this new species is much like *F. Wormaldi*, but its flowers are very different. They are produced on long foot stalks, and are of a light red colour, having the end tipped with green. Each flower is about three quarters of an inch long. It does not produce much show, but is in other respects interesting.

SALVIA.—(New species.) Mr. Lowe, received a quantity of Mexican seeds sent from Mr. Tweedie, amongst which is a beautiful species of *Salvia*, which is now in flower. The plant grows four feet high, and the shoots terminate, each with a spike of flowers, of a fine blue, marked inside with white. They resemble the *S. angustifolia*, but are larger and of a deeper blue. The plant appears to be a very free grower, sending up numerous shoots from the roots. It appears to be very suitable for the open border in summer, and would produce a fine effect.

SALVIA PATENS.—Also received from Mr. Tweedie, and is a most splendid species. The plant was growing in the open border, about two feet high, a few blossoms were only left when we saw it, but it appeared to have had flowers on the spike, for a foot or upwards. Each flower is about two inches long, of a most intense blue, producing a fine effect. A bed of it in contrast (or even a single plant) with the fine scarlet and crimson kinds, would produce a fine effect. This new and fine species has not, like the blue flowered *S. Africanus* large foliage and few flowers in proportion, but appears to be the reverse of it. Plants will be ready for sale next spring, and ought to be in every conservatory, greenhouse, and flower garden.

COMBRETUM PURPUREUM. A correspondent in the *Gardeners Gazette*, states, that there is a plant of *Combretum purpureum* growing in a stove in the Mastyn Hall Gardens, which covers three hundred and eight superficial feet trained against a wall, and which had, in July last, near three hundred racemes of its fine graceful and showy flowers. The plant is growing in the corner of the pine pit, which had been partitioned off, and filled with fresh

loamy soil. The plant must have had a most splendid effect. It is further stated that the best mode of propagation is, to bring some strong roots into pots, and then to graft scions upon them. Cuttings will succeed if, when put off, the pot be placed in a greenhouse until the base of the cuttings become caloused, (a discernable swelling), then being taken into a higher temperature, the stove roots are speedily induced to push forth.

CORREA MILNERII.—Mr. Groom has a good stock of this new and fine flowering kind, but in consequence of propagating so easily, the price is two guineas a plant. The blossoms are large, and of a fine rosy red colour. It is a very desirable plant for the greenhouse or conservatory.

IPOMEEA SELLOU'II.—We saw a fine plant of this new species in bloom at Mr. Groom's. The flower is of a fine rosy-purple colour, having a dark eyed tube, with five darker plaits down the corolla, and each blossom is at least three inches across. Being produced in clusters and very numerous, renders it a most ornamental plant, for the plant stove, warm greenhouse, or conservatory. The plant has a very fine foliage, and is a rapid grower.

GOLPHEMIE AUREA. We saw a plant of it in bloom with Mr. Groom, in April, in the greenhouse, and the same plant we saw removed into the plant stove, in fine bloom in October, so that it had been blooming for more than six months. It is a neat growing plant, about four feet high, branching, and each branch terminating with a spike of golden coloured flowers, each blossom being about half an inch across.

CHORIZEMA CORDATA.—Plants of this very interesting and beautiful species have been in bloom in most of the public nursery establishments around London, most of the Summer. It is a neat growing plant, flowering profusely, and is a very conspicuous object in the collections. It ought to be grown in every greenhouse and conservatory. It is a very rapid grower and propagates readily when struck in sand and heat.

HIBBERTIA PEDUNCULATA.—An interesting plant growing in the greenhouse at Messrs. Loddiges's. It grows about a foot high, bushy, flowering most profusely for some months, and with its bright golden flowers, has a showy and pretty appearance. It may be procured very cheap, it merits a place in every collection.

EDITOR OF MONTHLY NOTES.

It is our purpose in future in each number of the Cabinet, to insert the substance of our monthly observations and remarks upon every thing connected with floriculture that may come under our notice. In recently looking over the floral periodicals and gardening works, we noticed in the *Gardener's Magazine* a very interesting account of Bedford Lodge, Camden Hill, near London, the Suburban Villa of His Grace the Duke of Bedford. The particulars have been furnished by Mr. Caie, the excellent gardener there. There are six well executed wood engravings given, exhibiting views of the mansion, grounds, and flower garden. The cultivation of flowers, it appears, is a principal object there, and a very striking feature in the management of the flower garden, is to produce the most brilliant display of flowers during May, June and July, the period when His Grace most usually visits there. We have been informed by those visiting the place, that the display of flowers during those months, and even up to October, is such as to be quite dazzling. In order to have the finest flowering annuals in full bloom as early in the season as May and June. Mr. Caie sows the seed as early as January, viz., such as *Nemophilla insignis*, *Collinsia grandiflora*, *Gilia tricolor*, *Gilia achilleæfolia*, *Collomia coccinea*, *Platystemon californicus*, *Eschscholtzia crocea*, &c. When the display of these are declining, a second exhibition is produced by perennial plants, which are grown permanently in their compartments, such as *Oenothera macrocarpa* which succeeds *Nemophilla insignis*.



REFERENCE TO THE EMBELLISHMENTS.

We have recently had the pleasure of seeing a number of drawings of Hybrid Gladioluses exhibiting by J. Plant, Cheadle, Staffordshire: we were much struck with their novelty and splendour, and Mr. P. having kindly allowed us the use of the drawings, thus affording us the pleasure of giving our readers four of those we judged most beautiful.

Mr. P. informed us that he had a great quantity of other seedlings which he expects to bloom next summer, and has also a lot of hybrids from quite a different origin, some of which have bloomed, and have a delightful and powerful fragrance.

FLORICULTURAL CALENDAR FOR NOVEMBER.

All greenhouse plants should now be housed without delay, and air admitted, except when it is frosty. The plants should not be watered in the evening, but in the early part of the day, so that the damps may be dried up before the house is closed, as they are during the night prejudicial to the plants. The soil in the pots should frequently be loosened at the surface, to prevent its forming a mossy or very compact state.

The plants of the Cactus that have been kept in the open air during the summer, may be brought to bloom successively, by taking such as are desired to bloom immediately into the heat of a forcing pine house. Other plants to bloom afterwards, should be kept in a greenhouse protected from the frost.

The plants of the *Calceolaria* that has been grown in the open borders during the summer months, should now be taken up and potted, afterwards kept in a cool frame, or cool part of the greenhouse, being careful not to give too much water, just sufficient to keep the soil moist will only be necessary.

The Chinese Primroses that has been grown in the open borders, will require to be taken up.

The plants of some of the *Chrysanthemums* that are grown in pots, and taken into the greenhouse, will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting the plant to the weakening of the flower. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. And so much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants.

The *Dahlia* seed, if not cut off by frost, will now be perfected. They are best retained in the heads as grown, spread singly, where they will not be liable to mould, and kept in a dry, but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots will now require taking up, if not done last month.

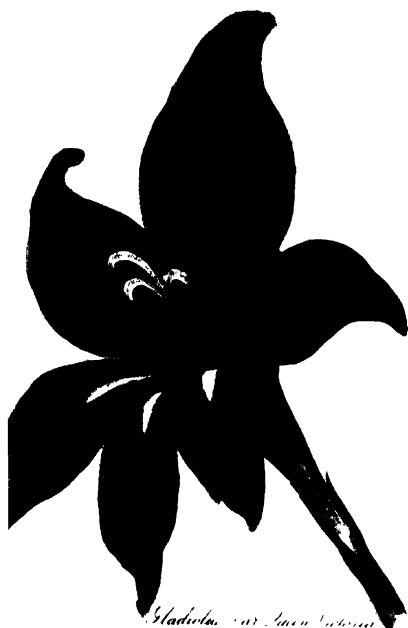
Dutch roots may in this month be successfully planted.

Fuchsias and greenhouse plants intended to be inured to the open air, will require to have protection at the roots, &c.

Tubers of *Commelinas*, and bulbs of *Tigridias*, should be taken up and preserved dry through winter.

Newly planted shrubs, in exposed situations should be secured to stakes.

Herbaceous border plants may still be divided and replanted.



Gladiolus var. lucasii



G. var. fuchsii



Gladiolus



Gladiolus

THE FLORICULTURAL CABINET,

DECEMBER, 1st, 1838.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON CHINESE GARDENS.

BY SIR W. C.

AMONGST the Chinese, gardening is held in much higher esteem, than it is held in Europe; they rank a perfect work in that art, with the great productions of the human understanding; and say that its efficacy in moving the passions, yields to that of few other arts whatever. Their gardeners are not only botanists, but also painters and philosophers, having a thorough knowledge of the human mind, and of the arts by which its strongest feelings are excited. It is not in China as in Italy and France, where every petty architect is a gardener; neither is it as in another famous country, where peasants emerge from the melon grounds to take the periwig, and turn professors; as Sganarelle, the faggot maker, quitted his hatchet and commenced physician. In China gardening is a distinct profession, requiring an extensive study, to the perfection of which few arrive. The gardeners there, far from being either ignorant or illiterate, are men of high abilities, who join to good natural parts most ornaments that study, travelling, and long experience can supply them with; it is in consideration of these accomplishments only that they are permitted to exercise their profession; for which the Chinese taste of or-

namental gardening is an object of legislative attention; it being supposed to have an influence upon the general culture, and consequently upon the beauty of the whole country. They observe, that mistakes committed in this art, are too important to be tolerated; being much exposed to view, and in a great measure irreparable: as it often requires the space of a century to redress the blunders of an hour.

The Chinese gardeners take nature for their pattern, and their aim is to imitate all her beautiful irregularities. Their first consideration is the nature of the ground they have to work upon; whether it be flat or sloping, hilly or mountainous, small or of considerable extent; abounding with springs and rivers, or labouring under a scarcity of water; whether woody or bare, barren or rich; and whether the transitions be sudden, and the character grand, wild, or tremendous, or whether they be gradual, and the general bent, placid, gloomy or cheerful. To all which circumstances they carefully attend; choosing such dispositions as humour the ground, hide its defects, improve or set off its advantages, and can be executed with expedition at a moderate expence.

They are also attentive to the wealth or indigence of the patron by whom they are employed; to his age, his infirmities, temper, amusements, connections, business and manner of living: as likewise to the season of the year in which the beauty of the garden is likely to be most frequented by him; suiting themselves in their composition to his circumstances, and providing for his wants and recreations. Their skill consists in struggling with the defects and imperfections of nature, and with every other impediment; and in producing in spite of every obstacle, works that are uncommon, and perfect in their kind.

Though the Chinese artists have nature for their general model, yet are they not so attached to her as to exclude all appearance of art; on the contrary, they think it, on many occasions, necessary to make an ostentatious shew of their labour. Nature, say they, afford us but few materials to work with; plants, ground, and water, are her only productions; and though both the forms and arrangements of these may be varied to an incredible degree, yet have they but few striking varieties; the rest being of the nature of changes rung upon bells, which, though in reality different still produce the same uniform kind of jingling, the variation being too minute to be easily perceived.

Art must therefore supply the scantiness of nature; and not only be employed to produce variety, but also novelty and effect; for the simple arrangements of nature are met with in every common field, to a certain degree of perfection, and therefore are too familiar to excite any strong sensations in the mind of the beholder, or to produce any uncommon degree of pleasure.

It is indeed true, that novelty and variety may both be attained, by transplanting the peculiarities of one country into another, by introducing rocks, cataracts, impending woods, and other parts of romantic situations, in flat places; by employing much water where it is rare, and cultivated plains, amidst the rude irregularities of mountains; but even this source is easily exhausted, and can seldom be put in practice, without a very great expence.

The Chinese are no enemies to strait lines, because they are generally speaking, productive of grandeur, which often cannot be attained without them; nor have they any aversion to regular geometrical figures, which they say are beautiful in themselves, and well suited to small compositions, where the luxuriant irregularities of nature would fill up and embarrass the parts they should adorn. They likewise think them properest for flower-gardens, and all other compositions, where much art is apparent in the culture; and where it should not be omitted in the forms.

Their regular buildings they generally surround with artificial terraces, slopes, and many flights of steps; the angles of which are adorned with groups of sculpture and vases, with ornaments intermixed with all kind of artificial waterworks, which, connecting with the architecture, spread the composition, serve to give it consequence, and add to the gaiety, splendor, and bustle of the scenery.

Round the main habitation, and near all their decorated structures, the grounds are laid out with great regularity, and kept with great care; no plants are admitted that intercept the view of the buildings, nor any lines but such as accompany the architecture properly, and contribute to the general symmetry and good effect of the whole composition; for they hold it absurd to surround an elegant fabric with disorderly rude vegetation; saying, that it looks like a diamond set in lead, and always conveys the idea of an unfinished work.

When the buildings are rustic, the scenery which surrounds them is wild; when they are grand, they are gloomy; when gay,

it is luxuriant : in short, the Chinese are scrupulously nice in preserving the same character throughout every part of the composition ; which is one great cause of that surprising variety with which their works abound.

They are fond of introducing statues, busts, bas reliefs, and every production of the chissel, as well as in other parts of their gardens as round their buildings, observing, that they are not only ornamental, but by commemorating past events, and celebrated personages, they awaken the mind to pleasing contemplation ; hurrying our reflections up into the remotest ages of antiquity ; and they never fail to scatter ancient inscriptions, verses, and moral sentences about their grounds, which are placed upon the back of colossal tortoises and elephants ; on large ruined stones and columns of marble, or engraved on trees and rocks : such situations being always chosen by them, as correspond with the sense of the inscriptions ; which thereby acquire an additional force in themselves, and likewise give a stronger expression to the scene.

They say that all these decorations are necessary to characterize and distinguish the different scenes of their compositions ; among which without such assistance, there would unavoidably be a tiresome similarity.

And whenever it is objected to them, that many of these things are unnatural, and ought therefore not to be suffered, they answer, that most improvements are unnatural, yet they are allowed to be improvements, and not only tolerated, but admired. Our vestments, say they, are neither like leather, nor like our skins, but formed of rich silks and embroidery, our houses and palaces bear no resemblance to caverns in the rocks, which are the only natural habitations ; nor is our music either like thunder, or the whistling of the northerly wind, the harmony of nature. Nature produces nothing either boiled, roasted or stewed ; and yet we do not eat raw meat ; nor doth she supply us with any other tools for all our purposes, but teeth and hands ; yet we have saws, hammers, axes, and a thousand other implements ; in short, there is scarcely any thing in which art is not apparent, and why should its appearance be excluded from gardening only ? Poets and painters soar above the pitch of nature, when they would give energy to their compositions. The same privilege, therefore, should be allowed to gardeners ; inanimate simple nature is too insipid for our purpose ; much is expected from us, and therefore we

have occasion for every aid that either art or nature can furnish us with. The scenery of a garden should differ as much from common nature, as an heroic poem doth from a prose relation; and gardeners, like poets, should give a loose to their imagination, and even fly beyond the bounds of truth, whenever it is necessary to elevate, to embellish, to enliven, or to add novelty to their subject.

The usual method of distributing gardens in China, is to contrive a great variety of scenes, to be seen from certain points at which are placed seats or buildings, adapted to the different purposes of mental or sensual enjoyments. The perfection of their gardens consists in their number and diversity of these scenes; and in the artful combination of their parts; which they endeavour to dispose in such a manner, as not only separately to appear to the best advantage, but also to unite in forming an elegant and striking whole.

(To be continued.)

ARTICLE II.

ON THE CRATÆGUS OXYANTHA AND ITS VARIETIES.

BY MR. JAMES SMITH, ABERDEEN.

THE garland of Flora does not possess a more charming blossom than this British hedge beauty; nor do the most luxurious spices of Asia, give a more grateful perfume than this sweet flowering shrub presents.

It is said that the hawthorn flowers, not only regale the spirits by their odour, but that they have the power also of counteracting poison. It has been made the happy emblem of hope, because the young and beautiful Athenian girls brought branches of hawthorn flowers, to decorate their companions and friends on their wedding day; whilst they carried large boughs of it to the altar. The altar of Hymen was lighted with torches made of the wood of this tree, and it formed also the flambeau which lighted the nuptial chamber.

Diodorus, a Sicilian historian, who flourished about forty years before the Christian era, tells us the Troglodites, when they interred the corpses of their friends and parents, tied branches of hawthorn to their bodies: and then, laughing, strewed the body first with the branches of this shrub, and afterwards with stones,

until it was covered. These simple people considered death as the morning of life, where they should never separate. Happy hope ! which gave the Troglodites immortality, and the Grecian youths fond of marriages ; may, you likewise, ever be the prop of the afflicted, and those whose friends

——— “ When they once perceive
The least rub in your fortune, fall away
Like water from you, never found again
But when they mean to sink ye.”

Religion which was given to bless mankind with cheerfulness and hope, has always been converted by the crafty, in ignorant ages, into rods of terror and torches of superstition ; and they did not fail to seize upon the hawthorn bush as an instrument with which they might impose on the credulous ; thus, in some parts of France, the country people affirm to you in good faith, that the hawthorn groans and sighs on the evening of Good Friday, and on this superstition, they have made it the emblem of lamentation. There are others, who gravely adorn their hats with a bunch of hawthorn, in the belief, that during a storm, the thunder will not dare to reach them, from respect to their head-dress It is also related, that on the morning following the horrible massacre of St. Bartholomew, a hawthorn was seen to blossom in the church yard of St. Innocent, in Paris, which is now converted into the hall or great market. It is hardly necessary to state, how differently the two parties interpreted this phenomenon.

We have also our Glastonbury thorn stories, to match those of our neighbours. Sanctified deceit affirmed, that this thorn was the identical staff of Joseph of Arimathea, the counsellor who buried Christ ; who, according to the tradition of the abbey of Glastonbury, attended with twelve companions came over into Britain, and founded in honour of the blessed Virgin, the first Christian church in this island. As a proof of his mission, he is said to have stuck his staff in the ground, which immediately shot forth and blossomed ; and the vulgar for a long time believed that this tree blossomed annually on Christmas day.

The Glastonbury thorn is a variety of the common white thorn *Oxyantha*, which blossoms in the winter about January or February, and sometimes even as early as Christmas.

It is often called white thorn from the colour of the flower-petals, May-bush from blossoms appearing in that month, and which were

more noticed in old times before the country was embellished with so many early-blowing shrubs; for on the festival of Flora, on the first of May, our ancestors never failed decorating with it the May-pole, which was permanently fixed in or near every town and village in the kingdom, and the boldest youth climbed to fix the garland of flowers on the top, whilst others less courageous, hung festoons and wreaths of flowers through the garland, or twined them around the pole,

“ To fetch the flowers fresh, and branch and blome,
And namely, hawthorn brought both page and grome,
With fresh garlandes, partly bleu and white;
And then rejoycen in hir grete delite.”

CHAUCER.

A king and queen were then elected, who regulated the entertainment, and settled disputes; the former was distinguished by an oaken wreath, and the latter by one of hawthorn; when dancing and other rural sports took place in honour of the goddess. This rustic amusement was evidently introduced by the Romans; in their ancient games, that of Floralia were instituted in Rome as early as the time of Romulus, and which the Phoceans and Sabines observed even in earlier days. As Rome became degenerated, this feast was turned into scenes of the most unbounded debauchery and licentiousness; and it is related that Cato wished once to be present at the celebration, but when he saw that a deference for his presence interrupted the feast, he retired, not choosing to behold the indelicate spectacles that were about to take place in public. This behaviour so captivated the degenerate Romans, that the venerable senator was treated with the most unbounded applause as he retired, which shows that virtue and modesty are always respected even by vice itself.

At the present time there is not a door in Athens, that is not crowned with a garland of flowers on the 1st of May; and the youth of both sexes, with the elasticity of spirits so characteristic of a Greek, that when under the power of the Turks, they forgot or braved their masters, while with guitars in their hands and crowns upon their heads,

“ They lead the dance in honour of the May.”

Religious devotees call it the noble thorn, from a belief that it was this thorn which formed the crown of Christ.

The hawthorn branches are scarce less gaily besprinkled by Flora in the spring, than adorned by Pomona in the autumn, who nourishes the feathered choristers with these scarlet haws, and on this account we should have in our shrubbery

———— “berry bearing thorns,
That feed the thrush,”

And none should omit

“The hawthorn bush, with seats beneath the shade.”

The double blossomed hawthorn, is certainly one of the greatest ornaments of our pleasure grounds, whether it be kept as a shrub, or trained as a tree. There was, or perhaps still remains two large trees, of this description on the lawn, before Warwick house, at Worthing, whose impenetrable shade defies the beams of Sol, when he darts his fiercest rays.

Some of the double varieties are of a fine crimson, rose, and lake colour; others are white at their first appearance, and change to a faint red as they decay. The double blossoms are less fragrant than the common variety, which reminds us, says a French writer, of those young females who fear not to change their simple apparel for a more gaudy dress, which adds nothing to their attractions.

The foliage of the hawthorn is of the most agreeable medium green, and so highly polished, that the white flowers are reflected on their shining surfaces.

It has often caused our surprise that men who expend large sums of money in forming gardens of pleasure, and much time in selecting plants, should bestow no time or attention on botany, which would add so materially to the gratification which flowers give them; for without some slight knowledge of this science, they cannot enjoy the works of nature, because they do not know where to look, or the utility at what they look at. The botanist looks into the flowers of the hawthorn, not only to observe the stigma and to count the chives that surround it, but observes the shape of the five petals, whose concave forms protect the pollen, and mature it by acting as reflectors. He then sees them bend over their chives, and rest their heads of pollen on the stigma, which has some attractive power not yet defined. He is delighted with the regularity and order with which they discharge

their prolific powder, and retire back to give place to other chives until the whole have performed their office without confusion. He knows then that the petals have discharged their part towards the formation of the future plants and he sees them given to the wind without regret, because it is necessary for the young fruit to enjoy the juices of the plant, without being spent any longer upon the petals.

J. SMITH.

ARTICLE III.

ON THE GERANIUM HOUSE.

(Continued from page 256.)

“ The tuberous-rooted sorts are much less generally cultivated now than formerly, their flowers bearing no comparison to those of the half shrubby kinds. Such may, however, be readily increased by planting pieces of the roots in small pots, in a slight heat; leaving a small portion of the root above ground.

On this subject, the following rational remarks are from the pen of Mr. Appleby, in a communication in the Horticultural Cabinet, Vol. V. p. 9.

“ During the growing season, they require water very freely; but as soon as they have done flowering, and their leaves begin to turn yellow, decrease the quantity of water gradually; the best method to do this, will be to water once in three days, then once a week, then once a fortnight, and lastly once a month: by which time they will be completely at rest, when no water must be given them till they begin to grow again, which may be looked for about February and March. When at rest, any situation where they can be kept moderately dry and cool, will do for them: heat, light, and moisture being unnecessary.”

“ The best time to increase this section of *Pelargoniums*, is just before they begin to grow. Take off a small tuber or two, where they can be spared, from each plant, and put them into as small pots as they can be placed, just to cover them; place them in gentle heat giving them but little water till they begin to grow, when they may be removed amongst the established plants, and the ordinary culture given; they may also be increased by seed

which, however, they do not produce so freely as the shrubby species."

In regard to the species that have not been hybridized, of which *P. bicolor*, *tricolor*, *ovatum*, *tetragonum*, *elatum*, *pendulum*, *fulgidum*, *elegans*, &c. form a part, the above authority directs as follows: "As they are all shrubby species, they require watering all the year, though always carefully, for if the soil gets soddened with water for any length of time, it is in general fatal to the plants. They also require greenhouse treatment during winter and spring. In summer they should be placed out of doors in an open situation, screened from high winds, and set upon a bed of ashes so thick, as to prevent worms from getting into the pot; keep them clear of weeds, tied up neatly, and regularly watered during dry weather. Pot them into larger pots when they require it, the best operation for which is the month of April.

To propagate them take youngish cuttings off about the month of May; fit some bell or small hand-glasses to such a number of pots as may be required; fill them half full with broken potsherds, rough bits of turf, or any thing that will permit the water to pass freely off; pot in upon them as much compost, (loam, peat earth, vegetable soil, and sand, in equal proportions, which is found to be the most proper for them) as will fill up to the top with pure sand, then give it a gentle watering, and insert the cuttings, giving more water to settle the sand close and firm to them. When pretty dry, cover them with the glasses, and place them in a gentle heat; pot them off, when struck, and keep them close and warm till they have struck root again; then give them the ordinary treatment as to situation, air, watering, potting, and so forth."

Propagation of the large or ordinary sorts of *Pelargoniums* by seeds is seldom practised, excepting with a view to obtain new varieties; and it is almost vain to attempt this, unless attention has been paid to artificial impregnation. *Geranium* seeds are best sown soon after they are ripe, provided that does not happen after August, in which case it would be better to delay sowing till February or March. When the seeds are sown, they should be placed in a mild hot-bed, and regularly shaded till they have vegetated, after which they should have been accustomed to the sun and air to harden them previous to their being potted, which should be done when they are about an inch, or an inch and a half high; their treatment after this differs from that of cuttings, only that they need not be topped with a view to form bushy plants, as

it is not until they flower that their merits can be ascertained.

Seedlings however should be stimulated, by being grown in very rich soil, and occasionally watered with liquid manure.

General treatment when in the House.

By the latter end of September, the Geraniums, if they have been placed out during the summer, should be arranged in their winter habitation, along with such as has been recently propagated from cuttings. We would be understood here, however of not advocating the practice of originating the whole collection of Pelargoniums annually from cuttings, for we have found that most sorts flower well the second year, by following the simple routine of shaking the mould entirely away from such plants as have been cut down, after flowering, re-potting them again in much smaller pots than those they flowered in, and placing them for a fortnight or three weeks in a close frame in which a slight bottom heat is maintained, until they begin to make fresh roots and break into young branches. After this they should be placed in a sheltered situation until the end of September, when they are removed into the Geranium house. During winter they should be supplied with air and water, and kept slowly growing until February, when they should be shifted into pots at least two sizes larger than those they have stood in during winter. From this time until they begin to come into flower, their growth should be encouraged by allowing them plenty of room on the shelves or stages, supplying them with an abundance of air and water, and turning them frequently round, so that all sides of the plants may enjoy an equal share of light and sun.

If kept too close, or too far from the glass, Geraniums are liable to grow up weak, and in that case seldom flower fine: they are also liable in that case, to be attacked by the green-fly, which must be removed upon its first appearance, by the application of tobacco smoke from the fumigating bellows. They are not subject to any other diseases. We are aware that this is not the practice followed by the most eminent growers of this splendid tribe, but we recommend it to such as, from a variety of circumstances, have neither the convenience or skill to bring on an annual supply.

The plants originated from cuttings planted in August and treated as directed above, may, when potted into two-sized pots, be

placed in the Geranium house, or if they be kept in a cool, airy pit or frame, they need not be removed till the beginning of November: at all events, at whatever period they are brought in, it is essential that they should be placed as near to the glass as possible, and abundantly supplied with air, and not set too closely together. All rambling shoots, and such as appear to grow too fast, should be pinched off, for the future habit of the plant depends on its treatment at this period. Most young plants have a tendency to send up one leading shoot, which often attains a considerable height without sending out lateral branches. A plant allowed to run so, can never afterwards be brought into a handsome form, and if the formation of the plant be not set about when young, it cannot be done afterwards without sacrificing the flowers, which lie in embryo in the points of the shoots that would in that case be cut off. One of the greatest faults in the ordinary mode of cultivating Geraniums is, to run up tall and naked at the bottom; when such a course is followed, the plants will neither flower well nor look so handsome.

The Greenhouse kinds of Geraniaceæ, though nearly all natives of the Cape of Good Hope, are much less hardy than the family of Erica from the same country; this may be accounted for in various ways;—soft wooded or succulent plants are more liable to be injured by frost, than hard wooded plants from that latitude, their exterior skin or outer bark being very thin, and their juices being extremely abundant. Again most of the family Erica are indigenous to the mountains, while most of the Geraniums are inhabitants of the plains, thus proving that altitude is as much to be studied in calculating the comparative degree of hardiness in plants, as latitude.

“We know,” says Mr. M’Nab, “from undoubted authority, that certain species of Cape Geraniaceæ, and certain species of Erica grow together in the same kind of soil, and in the same situation, intermixed one with the other in their native country; but we know that in this country the same species of heaths will bear a degree of cold with impunity, which will materially injure, and in many cases kill the Pelargoniums growing beside them.

“To grow Cape Ericæ and Geraniaceæ well together, would require far nicer management than I pretend to be acquainted with. I know, however, that heaths will bear a degree of cold in the greenhouse in winter, (which I am persuaded is beneficial to their health) which will materially injure Cape Geraniaceæ. If

therefore a particular point is to be found to which the thermometer may be allowed to sink in the inside of greenhouses during a severe frost, will preserve the Geraniaceæ from injury and not produce too much heat for the safety of the heath, it is one which I have never been able to ascertain.

“I am speaking however, of these two families so as to have them in a high state of perfection. They must be both kept in the same house so as to make a tolerable appearance; but I believe not in such a state of perfection as if they were in separate houses; for the fire heat which is absolutely necessary during severe frost for the one, is, as far as my observation goes, sure to be in some degree injurious to the other.”

Most of the Cape species are much hardier than the English hybrids, for many of the former, particularly the tuberous-rooted kinds, stand in the open borders of this country during winter, while none of the latter, so far as we know, have ever been known to do so. The same degree of cold that would not injure the most tender *Erica*, would be fatal to the whole tribe of hybrid Geraniums.

During winter, frost must be excluded by covering the Geranium house with canvass, or by the application of artificial heat from the fire, either through smoke flues or hot water pipes, so as to keep the temperature from falling below thirty-two degrees, but it should by no means be allowed to rise by the same means to forty degrees, a higher temperature during the day and by sun heat, is quite a different thing.

On the general treatment of Pelargoniums, we find the following communication of Mr. Appleby in Vol V. of the Horticultural Cabinet, so replete with good sense and practical skill, that we cannot do better than give the quotation almost at length.

“The season to take Geraniums into the greenhouse depends upon the weather; and as all Cape plants are much healthier, and flower more freely the more they are exposed to the full air, so long as frosts keep off, I delay the taking them in: in fact, this last season, I did not house them generally until the middle of October. Choice kinds I have covered up with mats or large sheets of canvass, elevated on stakes, on such nights as are likely to be frosty.

“Perhaps no months in the whole year are so unhealthy for Geraniums as November and December, for the weather generally is dark, damp, and rainy, and the plants being full of sappy green

leaves, and having received a check from the new potting, are often shedding leaves, which I constantly remove, or they would become mouldy, and give out a bad smell, offensive both to the owners and to the plants themselves. At all times during the day I give as much air as possible, by opening the doors, windows, ventilators, &c. In the mornings I have a fire made to dry up damp, but allow it to go out before the house is shut up, for the remedy is worse than the disease; close heat at this season being most injurious.

“During the severity of winter, fire is necessary to keep out the frost, (when very severe both day and night), but I am careful not to create damp by watering more than is absolutely necessary. It often happens on frosty days, that the sun shines clear and bright, and though the atmosphere is frosty, I always give air to lower the temperature of the house, to admit fresh, and to dry up damp.

ARTICLE IV.

ON THE DIFFERENT QUARTERS FROM WHICH THE WIND MOST PREVAILS EVERY MONTH IN THE YEAR.

BY AMICUS.

As THERE are few persons who are not acquainted with the wonderful difference which takes place in the temperature of the atmosphere, by the wind changing from one point of the compass to another, I take the liberty of sending you an extract of Metreological observations during the period of ten years, shewing from what quarter the wind most predominates in each month, a knowledge of which, may, perhaps, not be uninteresting to your readers, as there is no doubt that the existence of plants depends more upon the state of the temperature of the atmosphere than any other cause whatever.

The winds which predominate most in each month of the year are as follows:

During the month of January, the northerly winds predominate by a fourth of their amount prevail over the southerly.

During the month of February, the southerly winds predominate over the northerly almost a third.

During the month of March, the north east winds are in greater proportion, than during any other part of the year, exceeding their own average by more than a third, probably from the cold winds which are engendered on the desert wastes of Siberia, or northern Russia, seeking a more genial and warm climate at this season of the year.

During the month of April, the north-east winds abate somewhat of their excess, but still continue in very high proportion. The northerly winds predominate over the southerly; but the general easterly winds prevail over the westerly.

During the month of May, the north easterly winds having decreased for the last two months, fall below average, and the southerly winds predominate. Variable winds are at their greatest amount.

During the month of June the easterly winds predominate by more than a third, chiefly from a return of the north westerly wind.

During the month of July, the westerly winds prevail over all the rest; the south-west is also in high proportion; the north east is very low, and the wind from east to south at its minimum, having gone off for two months.

During the month of August, the wind from west to north is at its maximum, having increased for three months, and the wind from south to west, in high proportion, having increased for two months. The winds from north to east are at their minimum; and from east to south little removed from it. This month too, has the least proportion of variable winds.

During the month of September, there is almost a balance between the northerly and southerly winds; in other respects, the wind from east to south attains nearly its highest amount.

During the month of October, the north-east and south-east winds are nearly equal; but the winds from the south to west predominate over the whole; and with the aid of the wind from east to south, exceeds the northerly winds by a fourth of the sum of the latter.

During the month of November, northerly winds predominate at least by a fourth of their amount, chiefly bearing towards the east.

During the month of December, the northerly and southerly winds are nearly equally balanced; but the westerly winds double the sum of the easterly.

If you should think the above observations upon the variations of the wind worthy of insertion in the Cabinet, it is at your service, and also at the service of your readers.

AMICUS.

ARTICLE V.

REMARKS ON THE ROSE.

(Continued from page 256.)

AT what period this beautiful flower first found its way into English gardens is uncertain. Gerard speaks of it as no rarity in 1597. Hackluyt says, that the damask rose was brought in by Dr. Linaker, physician to King Henry VII. and his successor. But from the verses of Chaucer, and other old Poets, it appears that the garden roses were common in this country at a much earlier period, and we can hardly suppose that so many pilgrimages would be made to Rome, and even to Jerusalem, without some one's bringing back plants of these flowers, that were so commonly used in Christian churches, and so highly extolled for their medicinal virtues.

In those early days the principal gardens of this kingdom were attached to priories and other religious edifices, and as the heads of these establishments had frequent communication with similar communities on the continent, we may safely conclude that so precious a gift as the rose would not pass neglected. From the uxurious manner in which the Romans lived in this country for many ages, and from their habit of wearing wreaths of roses at their banquets, it is more than probable that they introduced many kinds of their own roses into the gardens which they formed in this island. The principal variety of the Provence rose are, the Common, Scarlet, Blush, White, Rose de Meaux, Pomponc, Rose de Rheims, Childing's Blandford, Rose of St. Francis, Shailer's,, and the varieties of the Damask rose are, the Red, Blush, York and Lancaster, Red monthly, White monthly, Blush monthly, Great Royal, Blush Goliath, and Imperial blush, with many others that are yearly raised in various parts of the world by sowing the seed.

THE MOSS ROSE.—*Muscova*.

“ The rose that hails the morning,
 Arrayed in all its sweets,
 Its mossy couch adorning,
 The sun enamour'd meets.”

This elegant rose is generally supposed to be the offspring of the Provence rose, whilst others think it belongs to the family of Centifolia or hundred leaved rose. It appears to be quite unknown to the ancients, as they have left no description of a flower that resembles it, and it is too singularly beautiful to have escaped Pliny's notice, had it been in existence. By Furber's catalogue it appears that it was cultivated here in 1724; but Miller first saw it in Dr. Boerhaave's garden in Leyden in 1727. The learned Doctor not only corresponded with many botanical persons in this country, but visited England, and became a member of the Royal Society of London. It is therefore most likely that on its first appearance in this country, a plant would be forwarded to Leyden, for the inspection of a person that all Europe was then regarding as the star of the age.

Although the moss rose appears to be a plant of so short an existence, its birth place is not satisfactorily known; but from all the accounts we can collect of its register, it appears to be a fortuitous child of England, as we have numerous accounts of its having been exported, but none of its importation into this island, nor has it been discovered elsewhere, except in a state of cultivation. Messrs. Lee and Kennedy, of Hammersmith have, a few years since produced a perfectly single moss rose, which they pronounce to be only a variety of the common Provins rose. We must therefore conclude that the moss-like pubescence of the calyx and young branches, is owing to some accidental circumstance which this climate produces, as we are told that this variety loses its mossiness, almost immediately when planted in Italy, and we have not yet heard of this rose having been in any instance raised from seed, for the single moss rose was reduced to that state from the double variety (either accidentally or intentionally) by a peculiar mode of cultivation. The single variety of the moss rose, as well as the double white moss rose, still continue scarce, and bring high prices to the nurserymen near London.

The moss rose is made the emblem of voluptuous love, and

the creative imagination of the poet thus pleasingly accounts for this rose having clad itself in a mossy garment :

“ The angel of the flowers, one day,
 Beneath a rose-tree, sleeping lay.
 That spirit—to whose charge is given,
 To bathe young buds in dews from heaven.
 Awaking from his light repose,
 The angel whisper'd to the rose,—
 ‘ O fondest object of my care,
 Still fairest found where all are fair,
 For the sweet shade thou’st given to me,
 Ask what thou wilt, ‘tis granted thee,’
 ‘ Then,’ said the rose, ‘ with deepened glow,
 On me another grace bestow.’
 The spirit paused in silent thought,
 What grace was there that flower had not?
 ‘Twas but a moment—o’er, the rose
 A veil of moss the angel throws.
 And, robed in nature’s simplest weed,
 Can there a flower that rose exceed ?”

M. Redouté, the author of a French pictured work on Roses, seems displeased at our claiming the moss rose as originating in England: he says, nous ferons observer qu’il n’est pas rare de voir les Iconographes Anglais considérer beaucoup de plantes comme indigènes au sol de leur pays, toutes les fois que le lieu dans lequel elles végètent naturellement leur est inconnu, circonstance qui doit faire rejeter toutes les assertions de ce genre.”

Madame de Genlis tells us, that during her first visit to England, she saw moss roses for the first time, and that she took to Paris a moss rose-tree, which was the first that had been in that city; and she says, in 1810, “ the cultivation of this superb flower is not yet known in France.”

Madame de Latour endeavours to do away with this statement. In a high strain of compliment, she says, “ when Madame de Genlis returned from London to Paris, she was become very celebrated, and the crowds of people who went to her house under pretence of seeing the moss rose were attracted thither by that lady’s celebrity; and the modesty of Madame Genlis alone could have led her into this error; for this rose tree,” she adds, “ which is originally from Provence, has been known to us for several ages.

Mr. Rossig, who has lately published a work on roses, and with good coloured figures, says, that the moss rose is found on the Alps. But this information comes rather late, as it is improbable that a plant of such a size and singular beauty should have escaped the penetrating eyes of the various botanists who have herbalized so frequently on these mountains, as not to have left a species of grass or even moss unrecorded.

The moss rose is propagated by layers or suckers which it sends up plentifully when growing in rich light garden mould, that is rather moist than over dry. When the branches are laid down they should be slightly bent so as to crack the bark, which will cause them to take root sooner. This beautiful rose is also increased by budding upon stocks of the other sorts, which is generally performed in the month of May; but these plants are not so durable as those raised by layers.

THE HUNDRED-LEAVED ROSE—*Rosa Centifolia*.

This is the rose which painters chuse to represent Love and Hymen. It is certainly a fine flower, being very double and of a deep crimson colour; but the perfume is very weak, and the petals do not hang so loose and gracefully as in many other species; and it has, from the regularity of its petals, been compared to a rose made by a turner, and there called *Flos quasi tornatus*.

This species of rose, which has become the Parent of a most numerous variety, is a native of the mountains lying between 41 and 42 degrees of north latitude, if we may trust to the best ancient natural historian that ever wrote on plants. Pliny says, that the roses which grow about Campania, in Italy, and near Philippi, in Greece, are so double, that they have a hundred leaves, and are therefore called *Centifolia*. "However," says the author, "these soils do not bring forth these hundred-leaved roses naturally, for it is the mountain Pangæus, near adjoining upon which they grow naturally, but when transplanted into the neighbourhood of Philippi, they become finer flowers than when on their native mountain;" and he adds, that "these very double roses are not so sweet as others."

This author tells us, that Cæpio who lived in the time of Tiberius,

was of opinion, that the hundred-leaved rose had no grace in a garland either for smell or beauty, and therefore should not be used in chaplets. Loureiro mentions it as a native of China; but Theophrastus and Pliny, clearly prove it to be an European tree.

Aiton does not notice the native place of this rose, and it is also omitted in *Le Bon Jordainier*, of Paris, down to the present time. The able compiler of the *Hortus Kewensis*, tells us from Gerard, that it was cultivated in our gardens in 1596. This appears to be an error, as Gerard in the original edition only notices this rose from the ancients; Martyn has fallen into the same mistake in his admirable edition of Miller.

We are not therefore able to discover at what time this rose was introduced, as it is not mentioned by Parkinson, in his *Garden of Pleasant Flowers*, of 1629; nor does it appear in his *Theatre of plants* of 1640.

THE CINNAMON OR MAY ROSE.—*Rosa Cinnamoma*.

This agreeably perfumed rose, which opens its small blossoms in our gardens about the end of May, is a native of Nice in Italy, and has been common in our pleasure-grounds for many ages, as Gerard tells us, in 1597, that it was then cultivated in this country, both in its single and double state.

This rose loves a dry soil and sunny situation, and deserves a more frequent place in the shrubbery than modern plantations allow it, as its flowers appear a month before the common roses, and the bush grows tall enough to fill a middle situation amongst shrubs, where its smooth plum-coloured branches have good effect.

It is a favourite with our fair, as it may be worn in the bosom longer than any other rose, without fading, whilst its diminutive size, and red colour, together with a pleasant perfume, adapt it well to fill the place of a jeweller's brooch.

THE MUSK ROSE—*Rosa Moschata*.

“ And each inconstant breeze that blows,
Steals essence from the musky rose.”

This species of rose owes its name to the fine musky odour

which its numerous white blossoms exhale during the autumnal months. It is a native of Barbary, and grows wild in the hedges and thickets in the kingdom of Tunis; and the Tunisians cultivate it also for the sake of a highly odorous essential oil, which they obtain from the petals by distillation.

This rose has been found growing naturally in Spain by Robert Moore, Esq. who sent seeds to this country. We presume it was planted in Spain, when the Moors first overran the coast of that country,

Hackluyt tells us, in 1582, that we first obtained the musk rose from Italy. It was cultivated commonly in the time of Gerard, and as it sends forth large umbel branches of flowers at the end of each branch, in the months of September and October, it forms an agreeable companion to the common China rose, which blossoms also plentifully at that season.

The stalks of the musk rose are often too weak to support the larger bunches of flowers that crown its branches. It therefore requires a support to keep them from the earth, unless it is planted with dwarf evergreens, that form a beautiful prop to these delicate blossoms.

THE YELLOW ROSE.—*Lutea and Sulphurea.*

The single yellow brier rose, is said to be a native of Germany, the south of France, and Italy; and the single orange-coloured rose, bicolor, is an Austrian rose.

That it was through these countries that we first became acquainted with the yellow rose, there can be no hesitation in stating; but they were originally brought from more eastern climates, seems equally certain, since no ancient author we have consulted mentions a yellow rose of any description; and had it been a flower created by the art of grafting, as was formerly imagined, we should, ere this, have discovered the fact. Ludovico Verthema tells us, in 1503. he saw great quantities of yellow roses at Calicut, from whence we have no doubt, both the single and double varieties were brought into Europe by the Turks, as Parkinson tells us in a work which he dedicated to Henrietta, the queen of our unfortunate Charles the First, that the double yellow rose "was first procured to be brought into England, by Master Nicholas Lete, a worthy merchant of London, and a great lover

of flowers, from Constantinople, which, as we hear, was brought thither from Syria, but perished quickly both with him, and to all other to whom he imparted it: yet, afterwards it was sent to to Mr. John de Franqueville, a merchant also of London, and a great lover of all rare plants, as well as flowers, from which is sprung the greatest store, that is now flourishing through this kingdom."

(To be continued.)

ON GROWING PLANTS IN ROOMS.

BY A FOREMAN OF A LONDON NURSERY.

To treat on the proper management of plants in houses is a subject attended with considerable difficulty, every genus requiring some variation both in soil, water, and general treatment. If the room where the plants are intended to be placed, is dark and close, but few will thrive in it; if, on the contrary, it is light, and airy, with the windows in a suitable aspect to receive the sun, plants will do nearly as well as in a greenhouse; but if they are observed to suffer, the effects may generally be traced to one of the four following causes, want of proper light and air, injudicious watering, filthiness collected on the leaves, or being potted in unsuitable soil.

The want of proper light and air, is, perhaps, the most essential point of any to be considered; for however well all other requisites are attended to, a deficiency in either of these, will cause the plants to grow weak and sickly. Let them always be placed as near the light as they can conveniently stand, and receive as much air as can be admitted, when the weather will allow; indeed those persons who have no other conveniency than the house to keep them in, will find that they derive immense advantage from being, during fine weather, in spring and autumn, turned out of doors in the evening and taken in again in the morning, the night dews contributing greatly to their health and vigour.

Injudicious watering does more injury to plants in rooms, than many persons imagine. To prevent the soil ever having a dry appearance, is an object of importance in the estimation of many, they therefore water to such an excess, that the mould becomes sodden, and the roots consequently perish. Others, to avoid this evil, run into the opposite extreme, and scarcely give sufficient

to sustain the life of the plant. This is, however, by no means so common a practice as that of giving too much; for in general, if anything appears to be the matter with the plants, large doses of water are immediately resorted to, and if recovery is not speedy, it is again administered, with but little doubt of its infallible restorative powers: but such persons like an unskilful physician, who gluts the weakly stomach of his patient, only hasten what they are trying to prevent. This overplus of water, will show its bad effects by a very dark colour, and if the plant receives too little, the leaves will turn yellow, and eventually die.

The best plan is, to always allow the soil in the pot to have the appearance of dryness, (but never sufficient to make the plant flag), before a supply of water is given, which should then be pretty copious, but always empty it out of the pan or feeder in which the pot stands, as soon as the soil is properly drained. The water used for the purpose, ought always to be made about the same temperature as the room in which the plants grow, never use it fresh from the pump, but either let it stand to warm all night, or take off the chill by adding a little warm water to it, or the growth of the plants will be much checked.

Filthiness collected on the leaves, may either arise from insects or dust, the former may be speedily remedied, by placing the plants under a hand glass, or any thing that is convenient, and burning some tobacco till they are well enveloped in the smoke; and the latter may be removed, by occasionally washing them on the head with pure water, either by means of a syringe, the rose of a watering pan, or with a sponge if the dirt still adheres.

By being potted in unsuitable soil is by far the most difficult part of the business to rectify, for no certain line can be drawn unless each genus was treated on separately; however, as this cannot be done in a paper like the present, a few general remarks which, perhaps, with some little exceptions, may be found to be pretty correct, will suffice.

All plants whose branches are fragile or slender, and roots of fine thready, fibrous texture with general habits like the *Ericæ*, as *Diosma*, *Andersonia*, and *Epacris*, will require the same soil (peat earth) and very similar treatment to Cape heaths.

Those whose wood and general habits partially differ, and whose roots are of a stronger texture, as *Acacia*, *Ardisia*, *Stenocarpus*, *Tetrathica*, *Tristania*, &c. will require a portion of sandy

loam, in many cases about equal parts ; and where the habits differ materially from the Heath, **only** a small portion of peat earth will be required, and a compost may be made a little rich, by the addition of well rotted dung, or a similar soil to that prescribed for pelargiums.

Almost all Cape and other bulbs, as Sparaxis, Ixia, Gladiolus, Tritonia, &c. thrive best in a rich sandy loam, without a mixture of peat.

Shrubby and herbaceous plants, with luxuriant roots and branches, as several species of Myrtus, Jasminum, Hibiscus Hermannia, Heliotropium, &c. require rich loam, lightened with leaf soil, without any portion of peat.

Plants with powerful roots, and but slender heads, as Veronica, Senecio, Scutellaria, Ruellia, Mauradia, &c. require a light sandy soil, mixed with a small portion of leaf mould and very rotten dung. At the time of potting always lay plenty of potsherds at the bottom of each pot, to give a good drainage.

It will be seen that those directions do not allude to either Orchideous, Succulent or Aquatic plants.

Many of the Orchidaceæ are parasitical, and **require** a portion of decayed wood, mixing with the soil ; others **grow** in damp moss, these being chiefly stove plants, they will not flourish in a room. There are several genera, that do very well both in the greenhouse and in rooms, as Arethusia, Calopogon, Dendrobium, Ophrys, &c. the soil suitable for these, is a mixture of about equal parts of light sandy loam and peat ; very little, or no **water**, must be given when they are not in a growing state.

Succulent plants of all descriptions, require very little water and in general very easily managed in rooms ; many of them thrive in a mixture of **sandy** soil and lime rubbish, as Aloe, Calceola, Cactus, Aizoon, &c. others grow well in a mixture of peat and loam, as Coris, Cotyledon, Mesembryanthemum, &c.

Aquatic plants, as Villarsia, Actinocarpus, &c. generally do well in a mixture of peat and loam, and require to be kept **constantly** in a wet state ; indeed the best way is to place the pot in a deep pan or feeder, which should always be kept full of water.

Bulbs of most sorts flourish in rooms, with less care than most other kinds of plants.

If the above precautions be attended to, plants may be brought to nearly, if not altogether to as much perfection as in a greenhouse.

BY A FOREMAN OF A LONDON NURSERY.

ARTICLE VII.

ON THE CULTURE OF FUCHSIAS IN POTS.

BY MR. W. M^P. STRADSETT HALL GARDENS.

HAVING derived much information since I became a subscriber to your useful and interesting publication, the Cabinet, I beg to forward you my method of treating that beautiful tribe of plants, so profuse in their flowering, and so well adapted for the greenhouse.

Propagation.—About the middle of March I take off cuttings, always choosing the young wood, with a little of the old attached to them, after dressing off one or two of the under leaves, I insert them in a compost of equal parts of peat and leaf, mould, and one-third loam, adding as much sharp sand as will keep the soil open. I then give them a gentle watering over hand with a fine rose, and after allowing the leaves to dry, plunge them into a hot frame previously prepared.

Culture.—As soon as they are rooted, I pot them off singly into pots, according to their size, always allowing them good drainage, using the above compost for this and all other shiftings, I replace them in the frame again until they have struck fresh root; I then remove them into the greenhouse, placing them in the front shelves. When the roots fill the pots, they should be shifted into a size larger, and towards the end of June, they will require a still larger pot; they should be liberally supplied with water at this stage of their growth, giving them a little over head, which causes them to grow freely, at the same time giving them a healthy appearance. About the beginning of August I finally shift them into pots from 12 to 14 inches in diameter, training them up to single stems.

Towards the end of October, they will require but little water, and during the winter they ought to be kept in a dry state, till they begin to push in the spring I always prefer young plants for pots, as they look much better than the old ones. I have had them from four to five feet in height, displaying their beautiful pendant blossoms in great profusion.

If you think the above remarks be worthy a place in your publication, they are at your disposal.

W. Mep.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

- 1.
- SPATHODIA PENTANDRIA*
- . Five stemmed. (Bot. Mag. 3681,

RIGNONIACEÆ. DIDYNAMIA, ANGIOSPERMIA.

It is a bignoniaceous flowering tree, and a native of India. It has bloomed in the stove of the Glasgow Botanic Garden during the last summer, the plant having attained the height of twenty feet. The plant grows erect, slightly branching at the top, where alone it is leafy. The flowers are produced upon a large panicle, and are very handsome, having much the appearance of a fine head of rosy lilac-coloured *Rhododendron ponticum* flowers. Each flower is about two inches long, limb, white and rosy purple, tube, yellowish white, calyx, dark red. It is altogether a notable plant. *Spathodea*, from *spathe*, a *spatha*; from the sheathing nature of the calyx.

- 2.
- VERONICA PROSTRATA*
- . var. Savory-leaved. Prostrate Speedwell. (Bot. Mag. 3683.

SCROPHULARINÆ. DECANDRIA MONOGYNIA.

A hardy perennial plant, producing flowers of great beauty. The stems are at first prostrate, then rises six or eight inches high, having long racemes of brilliant blue flowers which continue to bloom in succession for several months. It merits a place in every flower garden, being one of the most showy plants cultivated. It may be procured at the public nursery establishments at a low price, and is very easy of increase.

- 3.
- PLEUROTHALIS VITTATA*
- . Striped-flowered. (Bot. Reg. 133.

A native of Mexico, introduced into this country by Messrs. Loddiges. The stem appears to be of a prostrate habit. The flowers are slightly stained with dull purple. Sepals, the lower spotted with deep purple, the upper striped with the same colour,

- 4.
- CATASETUM ATRATUM*
- , Dark-flowered, (Bot. Reg. 63.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

Was introduced from Brazil by Messrs. Loddiges, and in whose extensive collection it has bloomed. It is so very distinct from other kinds that it is not considered a genuine species of *Catasetum*, having equally, a characteristic resemblance to a *Mynanthus*, into which genus, however, it is ultimately adopted, it will be a valuable augmentation. The blossoms are green, spotted with cinnamon, and each blossom about an inch across.

- 5.
- HELICHARYEUM MACRANTHUM*
- . Large-flowered. (Bot. Reg. 58.

COMPOSITÆ. SYNGENESIA, POLYGAMIA SUPERFLUA.

This very pretty everlasting flower has been introduced by Robert Man-

gles, Esq. from New Holland, where in the Swan River colony it is found growing profusely. It is an annual, producing large white flowers, and the end of each petal is beautifully tipped with rose. The genera *Helicharyeum* being very productive of seeds, we have no doubt but the present variety will soon become common in our gardens.

6. *HOVEA MANGLESII*. Captain Maugle's. (Bot. Reg. 62.

LEGUMINOSÆ. DIADELPHIA DECANDRIA.

A very pretty species of this beautiful genus, and is another of the valuable introductions of Mr. Mangle's, after whom Doctor Lindley has named it. It coincides much with *H. lanceolata*, but differs from that species, by being much more hairy. The blossoms are of a beautiful pale purple.

7. *MELOCACTUS DEPRESSUS*. Depressed. Bot. Mag. 3691.

CACTÆ. ICOSANDRIA. MONOGYNIA.

This species of melon-shaped Cactus, was introduced from Pernambuco by Mr. Gardener, and is now cultivated in several collections. It is an interesting species, and when out of bloom, produces a remarkable appearance, by the seed vessels, which are of a delicate transparent rose colour, rising erect above the crown.

8. *PAVONIA SCHRANKII*. Mr. Schrank's. (Bot. Mag. 3692.

MALVACEÆ. MONADELPHIA POLYANDRIA.

This beautiful species was sent from the Berlin Botanic Garden to Edinburgh, and in the stove of the Botanic Garden there, has produced its brilliant blossoms, which are about an inch and a half long, and one inch across, of a bright orange and scarlet colour.

9. *PAXTONIA BOSEA*. Rose. Bot. Reg. 60.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A curious and beautiful Orchidæ, introduced from Manilla by Mr. Hugh Cumming, and has bloomed in the collection of Messrs. Loddiges. The blossoms are pale, whole coloured, pink, and about an inch across.

10. *PENSTEMON GLADULOSUM*. Glandular. Bot. Mag. 3688.

SCROPHULARINÆ. DIDYNAMIA, ANGIOSPERMIA.

This handsome species is one among the numerous introductions of the late lamented Mr. D. Douglas. The plant is perfectly hardy, and blossoms during June and July. The colour of the flowers are lilac.

11. *STEVIA FASCICULARIS*. Close-headed. Bot. Reg. 59

COMPOSITEÆ. SYNGENESIA, POLYGAMIA EQUALIS.

A pretty little greenhouse plant, introduced from Mexico by G. F. Dickson, Esq. Its small pale blossoms are produced in close heads of about an inch in diameter, and which are sweet scented. *Stevia*, named in compliment to Mr. P. G. Esteve, professor of Botany at Valencia,

R E V I E W .

The Rose Fancier's Manual.—By Mrs. Gore. 12mo, pp.434
London, 1838.

(Continued from page 258.)

The *R. ferox* mingles its large red blossoms and thorny branches with those of the hundred-leaved; and the *R. pulverulenta* is also observed on the peak of Narzana, one of the Circassian chain.

"In the north of Asia, Siberia boasts the *R. grandiflora*, of which the corolla bears the form of an antique cup; the *R. caucasea*, the fruit of which is of a pulpy substance; and still adjoining the Caucasian provinces, we find a yellowish variety of the caucasea, of a dingy unattractive appearance. Advancing towards the Frozen Ocean, and beyond the Ural Mountains, grows the *R. rubella*, of which the petals are sometimes of a deep crimson, but often pale and colourless as the surrounding country. Still further north, flourishes the *R. acicularis* bearing solitary flowers of a pale red. Ten or twelve other species grow in the Russian provinces of Northern Asia; in particular, the *R. kamschatica*, bearing solitary flowers of a pinkish white.

"In Africa, one of the borders of the vast desert of Sahara, and more especially in the plains towards Tunis, is found the *R. moschata*, whose tufts of white roses give out a musky exhalation. This charming species is also to be found in Egypt, Morocco, Mogadore, and the Island of Madeira. In Egypt, too, grows the *R. canina*, or dog rose, so common throughout Europe. In Abyssinia, we find an evergreen rose tree, with pink blossoms, which bears the name of the country, as the *R. abyssinica*. Other species are, doubtless, to be found in the unexplored countries of Africa.

"In Europe, commencing, to the north west, with Iceland (so infertile in vegetation, that in some parts the natives are compelled to feed their horses, sheep, and oxen, on dried fish), we find the *R. rubiginosa*, with pale, solitary, cup-shaped flowers. In Lapland, blooming almost under the snows of that severe climate, grows the *R. majalis*, small, sweet, and of a brilliant colour; and the same beautiful species, as if in enlivenment of the cheerless rudeness of the climate, is to be found in Norway, Denmark, and Sweden. In Lapland, too, under shelter of the shrubby evergreens, among which the natives seek mosses and lichens for the nourishment of their reindeer, they find the *R. rubella*, already mentioned, the flowers of which are sometimes of a deep red colour.

"The *R. rubiginosa*, the pale flowers of which grow in clusters of two or three; the May rose; the cinnamon rose, the small pale red flowers of which are sometimes single, sometimes double; as well as several other hardy species; may be found in all the countries of Northern Europe.

"Six species are indigenous in England. The *R. involuta* exhibits its dark foliage, and large white or red flowers, amid the forests of North Britain, the leaves of which, when rubbed, giving out a smell of turpentine, as if derived from the pine trees among which the shrub takes root. In the same neighbourhood are found the *R. Sabina*; the *R. villosa*, the flowers sometimes white, sometimes crimson, blowing in pairs; and the *R. canina*.

"The environs of Belfast produce an insignificant shrub, known as the *R. hibernica*, for the discovery of which Mr. Templeton received a premium of fifty guineas from the Botanical Society of Dublin, as being a new indigenous plant, though since discovered to become the *R. spinosissima* in poor soils, and the *R. canina* in lousy land.

"Germany, though unproductive in rose trees, boasts of several highly curious species; among others, the *R. turbinata*, of which the very double flowers spring from an ovary, in the form of a crest; and the *R. arvensis*, with large flowers, red and double, in a state of cultivation.

"The Swiss mountains, and the Alpine chain in general, are rich in native roses. Besides the field rose, just mentioned, they have the *R. alpina*, an elegant shrub, with red solitary flowers, furnishing many varieties in cultivation: the *R. spinulifolia*, having pale pink flowers of moderate size, with thorny leaflets, that exhale a scent of turpentine. It is remarkable that two mountain roses, the Swiss *R. spinulifolia* and the Scottish *R. involuta*, should be thus alike characterised by the smell of turpentine. There remains to be cited among Alpine roses the *R. rubrifolia*, of which the red-tinted stems and leaves, as well as the pretty little blossoms of a deep crimson, form an agreeable variety to the verdure of the surrounding foliage.

"In the eastern and southern countries of Europe, rose trees abound; of which a considerable number remain to be examined and classed. The Crimea, for instance, is not acknowledged to contain a single species, though travellers describe the country as very productive in roses. In Greece and Sicily, we find the *R. glutinosa*, of which the leaflets produce a viscous matter; the flowers being small, solitary, and of a pale red. Italy and Spain have several distinct species; among others, the *R. Polliniana*, with fine large purple flowers, growing in clusters of two or three, and found in the neighbourhood of Verona. The *R. moschata* and *R. hispanica* flourish in Spain: the latter being at present excluded from the species established by Lindley. The flowers, of a light pink colour, appear in May. The *R. sempervirens*, common in the Balearic Islands, grows spontaneously throughout the south of Europe, and in Barbary. Its foliage, of glossy green, is intermingled with a profusion of small, white, highly scented flowers.

"For France, nineteen species are claimed by the Flora of De Candolle. In the southern provinces is found the *R. Eglanteria*, whose golden petals are sometimes varied into a rich orange. The *R. spinosissima* grows in the sandy plains of the southern provinces, having white flowers tipped with yellow, which have furnished many beautiful varieties. In the forests of Auvergne and the departments of the Vosges, we find the *R. cinnamomea*, which derives its name from the colour of its branches; the flowers being small, red, and solitary. The *R. parviflora*, or Champagne rose, a beautiful miniature shrub, adorns the fertile valleys in the neighbourhood of Dijon with its very double, but small, solitary, crimson blossoms. The *R. gallica* is one which has afforded varieties of every hue, more especially the kinds known as Provins roses, white, pink, or crimson. In the Eastern Pyrenees grows the *R. moschata*, a beautiful variety of which is known in our gardens as the nutmeg rose. The *R. alba* is found in the hedges and thickets of various departments, as well as the *R. canina*, or eglantine, the stock of which, straight, elegant, and vigorous, is so valuable for grafting."

This article, which is a translation from the French of Boitard, is by far the most interesting part of Mrs. Gore's book; as the monograph, to be hereafter noticed, and which is also after Boitard, is the latest and best that has yet been published.

The next article is on the culture of the rose, which is its principal use, as little is said of the culture of roses. Next follows "Botanical Character of the Rose;" "Hybrid Varieties of the Rose;" "Classification by Specific Character;" "Distinction of Species;" "Bibliography of the Rose;" and "Pharmacopœia of the Rose." This brings us to the end of Part I. page 79.

PART III.

MISCELLANEOUS INTELLIGENCE.

 QUERIES.

ON FORCING ROSES, and a list of kinds best suited for the purpose, &c.—It is difficult to obtain perfect blossoms on Rose-trees forced to bloom in February or March, and information on the subject through the medium of your useful and excellent publication, will be very acceptable.

These flowers are liable to hang down and lose their petals before they are fully expanded. Directions for their treatment are requested, particularly with regard to the degree of heat required, and the length of time the plants should remain in a stove, also whether it is advisable to sprinkle them freely with water early in the morning.

In addition to these inquiries information as to the Best Species of roses for forcing will much oblige

A SUBSCRIBER.

October 12th, 1838.

 REMARKS.

Plants Noticed in the the Bot. Reg, but not Figured.

AMPELYGONUM CHINENSE.—On examination, Dr. Lindley has determined to construct a new genus for this plant, and has assigned for it the name of 'Cephalophilon.' From this plant, Indigo, of an excellent quality is obtained. "Polygonum tinctorium, also in our gardens, is at this time extensively cultivated in Belgium as a domestic substitute for the tropical Indigo, and is said to 'produce the dye in great abundance, and of the finest quality.'"

BANISTERIA TENUIS.—A native of Buenos Ayres. The flowers are a bright yellow, and the plant is a greenhouse creeper.

BERBERIS TENUFOLIA.—This will prove a most valuable addition to the interesting and beautiful evergreens composing this genus. It has been sent from Vera Cruz, by Mr. Hartweg, to the Horticultural Society, London. It is expected to be nearly as hardy as *B. fascicularis*, and is described as "an evergreen bush with thin, smooth, rather glaucous pinnated leaves, entirely free from all spinosity."

CALYSTEGIA SEPIUM.—This, although a native of New Holland, is identified with the European Bind weed, and we presume it is only noticed by Dr. Lindley on account of its having been found in Australia.

CATASPIUM ATRATUM.—A native of Brazil, and cultivated by Messrs. Loddiges. The flowers are dark. A figure will shortly be given in the Bot. Reg.

CARPESIUM PUBESCENS.—Seeds of this plant have been received from Dr. Falconer; a plant of little importance, and a mere variety of *C. nepauncense*.

CYNOGLOSSUM GRANDIFLORUM.—A beautiful herbaceous plant, growing to the height of nearly three feet, with a strong and branching stem. The flowers are blue, bordered with white.

CYFELLA PLUMBEA.—Seeds of this plant have been introduced from Mexico, by George Frederick Dickson, Esq. It has somewhat the appearance of *tigridia*, and like this plant, the flowers are equally fugitive.

ECHEVERIA SECUNDA.—Raised in the garden of Sir Charles Lemon. It is a Mexican plant, requiring a high temperature a gravelly soil and very little water.

ENTELLA PALMATA.—A greenhouse shrub, occasionally cultivated in collections under the name of *sparmannia palmata*.

HYDROTENIA MELEAGRIS.—The curious plant in question, forming the basis of a new genus, has been found near the Real del Monte mines in Mexico, and communicated to Dr. Lindley, by John Rogers, jun. Esq., of Seven Oaks. It would appear to be intermediate between *tigridia* and *tritillaria*. The flower-stem is about eighteen inches high, and the flowers are in form and colour like *tritillaria pyrenaica*, but somewhat smaller.

MAXILLARIA VITELINA. This is a very beautiful plant, with yellow flowers, a native of Brazil, remarkable for having a rich deep brown spot in the centre of its yellow lip.

MORRENIA ODORATA.—A native of Buenos Ayres, and raised from seeds in the gardens of the Horticultural Society, London. This is a greenhouse plant, flowering in August and September. The name *Morrenia* has been given to this genus, to commemorate the name of Professor Chas. Morren, of Liege. The species in question requires the protection of the greenhouse, and is a dwarf creeper, with small dingy green flowers.

NICOTIANA ROTUNDIFOLIA.—Also a native of Swan River, and introduced by Robert Mangles, Esq., of Sunning Hill. The flowers are smaller than those of *N. suaveolens*, and the leaves resemble those of *Petunia nyctaginifolia*. It is a hardy annual with white flowers.

ONCIDIUM PULVINATUM.—A desirable plant, resembling *O. divaricatum*. The panicle of the flowers is eight or nine feet in length. A figure of this is also promised.

ONCIDIUM HIANs.—A small species approaching near to *O. carinatum*; a native of Brazil, and cultivated by Messrs. Rollesons. "It has small yellow and brown flowers, with an extraordinary appendage to the lip, erect white fleshy, as long as the column parallel with that organ, and resembling the four fingers of the hand, a little hollowed, and closed together. This is quite a new modification of structure.

PAXTONIA ROSEA.—Said to be a most curious plant, sent from Manilla, by Mr. Cumming. It flowered in the collection of Messrs. Loddiges during June last. This genus has been named in honour of Mr. Paxton, whose name deserves to be permanently associated with Orchidaceæ, a fact which will be readily admitted by all who have witnessed the admirable manner this curious and ornamental family is managed at Chatsworth.

PHYSOLIPHON CARINATUS.—This plant has recently been imported from Mexico, by George Barker, Esq., of Birmingham.

PICRIS BARBARORUM.—A cichoraceous plant, a native of New Holland, where it is used by the natives as an article of food; and Dr. Lindley says it is about as fit for this purpose as the common sow thistle.

PIMELEA CRINITA.—Said to be a pretty little plant, with white flowers. It has flowered in the collection of Robert Mangles, Esq., of Sunning Hill. It is a native of Swan River.

PODOLEPIS CONTORTA.—A pretty perennial plant, with golden yellow flowers and dark green fleshy leaves. The flower stem is from six to nine inches high. Seeds of this plant were sent from Van Dieman's Land, by Mr. J. Bunce, to the Horticultural Society, London.

POLYGONUM AMPLEXICAULO.—“This charming herbaceous plant, inhabiting the mountains in the north of India, with long graceful racemes of the most brilliant ruby-coloured flowers,” has lately made its appearance among some plants raised from seeds; we are not informed where, but a figure is promised. Its flowering season is July and August.

PSORALEA CINEREA.—An annual plant, of little beauty, with small purple flowers. A native of New Holland.

RŒPORA AURANTIACA.—Is a native of the interior of New Holland; the flowers are of an orange-yellow. It has been raised in the garden of the Horticultural Society, where it flowers in the open border during July.

SEDUM MISERUM.—A succulent plant of no beauty; a native of Mexico.

SPIRANTHES DIURETICA.—A native of Chili, with white and green flowers, studded in a beautiful manner with crystalline points. It is an orchidaceous plant, succeeding very well in the greenhouse.

THYSANOTUS INTRICATUS.—A figure of this pretty plant is promised to be given in the Bot. Reg.

VANAA LAMELLATA.—The flowers of this plant are as large as those of *V. Roxburghi*. The flowers are pale yellow, and stained with red. It is nearly allied to *V. spallhatuta*, a species common in the East Indies, but which no one seems yet to have imported.

EDITOR OF MONTHLY NOTES.

When plants are of half hardy perennials, they are taken up at the end of the season, preserved in pits or frames through winter, and turned out early in spring. In some of the beds a training plant is planted at the centre, such as *Maurandia Barclayana*, &c., and trained to rods or wires from the centre, in lines to the outside of the bed. As great a contrast in colour as possible is attended to, such as a bed of yellow *Calceolarias*, having the *Maurandia Barclayana*.

Ceanothus Speciosa, with its showy white flowers and the *Lysimachia pericillata*, yellow, are found to bloom freely where the shade of trees was very dense. The *Ceanothus taraxifolia* will also flourish well in such a situation. When grown in the pleasure ground, near to the walk, they have a very fine effect towards evening.

Campanula garganica with its pretty blue flowers, is one of the most ornamental of dwarf plants to be grown in a mass. Against a wall of some extent, Summer and Autumn flowering Roses are trained; some of the Autumn flowering kinds require to be protected, but an interesting discovery has been made relative to these kinds, viz. by having hardy kinds budded on the extreme shoots of the tender ones, and whilst all the shoots upon such plants not budded were destroyed by the severity of the last winter, not any of those parts which had been budded upon were in the least injured. Thus it appears that the vigorous and late growth of the scions, kept the stock in a condition of vigorous growth at the season when otherwise it would have been dormant.

It is stated in Paxton's Magazine of Botany that seed of the *Rhodanthe Manglesii*, being sown in August in pots, having each pot filled about one half with broken potsheerds, and then nearly filled up with a compost of (equal parts) decayed leaf mould and light maiden earth, on which the seed is sown and just covered from the light, kept moist, and placed in gentle warmth. The plants, as soon as can be done, are potted singly into small sixty sized pots, well drained. They are removed into larger pots as the roots issuing through the holes at the bottom indicate, and are kept in the greenhouse through winter, when they will bloom from the end of March. Sowings made in September or October, bloom proportionably later, and somewhat finer than the August sowing. Such a very neat and beautiful

flowering plant, well merits any attention given to it, and in the early part of the season is very ornamental for a greenhouse or room. Plants either in the open ground or pots, when the blooming is over, if not allowed to produce seeds, the withering flowers be cut off, and the plants be repotted into larger pots, will induce a fresh growth, and they will bloom abundantly.

The same attention to many of the new and showy annuals would be attended with equal success, and thus a Greenhouse, Conservatory, or Room might be highly ornamented in spring and early summer. Such kinds as *Noemophila*, *Eutocia*, *Gilia tricolor*, *Hibiscus Africanus*, *Calandrinia discolor*, *Browallia grandiflora*, *Bartonia aurea*, *Nolana atriplicifolia*, *Campanula Loreii*, *Clintonia pulchella*, *Lapinus nanus*, *Lupinus elegans*, *Malope grandiflora*, *Shænogyne speciosa*, *Salpiglossis pulchella*, &c. These require no forcing, and when in bloom mixing with bulbous flowering plants, &c., produce a lively effect. We have seen an instance where this attention to their culture has been attended to for the last three seasons, with delightful success. (CONDUCTOR)

Dahlias have this season been trained against a wall, and blooming profusely, had a beautiful appearance. In both sun and shade they succeeded well. *Chrysanthemums*, in either situation, did alike well. *Heartsease* trained against a shady wall, to fill up the vacancies between *Dahlias* or *Chrysanthemums*, have succeeded admirably.

NEW OR RARE PLANTS.

URCEOLINA PENDULA.—An *Amaryllidæ* plant, a native of the shady woods of the Peruvian Andes. The flowers are yellow with a green and white margin. It has bloomed in the greenhouse of the Honourable and Reverend W. Herbert, Spofforth.

MIMOSA MARGINATA.—This pretty plant has been grown in some collections of this country for about four years, and gone by the name *Mimosa prostrata*, *M. Mexicana*, and *M. scandens*. It has stood during the winters of 1837 and 1838 in the open border. It is a very neat plant for training against a wall, verandah, &c. Its pretty purple heads of flowers and neat foliage strongly recommend it.

DENDROBIUM DENUDANS.—brought into this country by His Grace the Duke of Devonshire's collector in India. The flowers are produced on nodding racemes, and are green and white.

CÆLOGYNE WALLICHIANA.—Another *Orchidæ* brought by the before mentioned collector. In its native country it grows and covers the ground with a pavement of its curious stems, which wither up in the dry season, but change into a brilliant carpet of rosy flowers when rain has descended.

MENDINILLA CRYTHROPHYLLA.—A plant belonging to the *Melastomacæ* tribe, brought from India by the above named collector. The flowers are of a bright rose colour, near an inch long, produced on axillary cymes.

GARDOQUIA BETONICOIDES.—Mr. Lowe of the Clapton Nursery received seeds of this plant from Mexico, and succeeded in raising it, with whom it has bloomed. It is an erect, sweet scented herbaceous plant. The flowers are of a bright purple. It resembles *G. Multiflora*, but the flowers are rather smaller.

TRADESCANTIA IRIDESCENS.—A native of Mexico, from whence it has been sent to Sir Charles Lemon, Bart. M. P., in whose collection it has recently bloomed. The flowers are produced numerously, and are of a bright reddish-purple colour. It is probable it will prove a half-hardy herbaceous plant.

IPOMŒA TYRCANTHINA.—G. F. Dickson, Esq. received seeds of this plant from Mexico, a plant of which has bloomed in the garden of the London

Horticultural Society. It is superior to either *I. Horsfalliae* or *I. rubro-cœrulea*. The flowers are very large, of a rich deep-purple, and being produced in profusion, have a splendid effect. It is a fine plant for the stove, conservatory or greenhouse.

EPIDENDRUM CALAMARIUM.—From Brazil. The flowers are of a yellowish green, with fine small violet coloured spots. It has bloomed with Messrs. Loddiges's.

CONCRETUM MACROPHYLLUM.—This is a noble species not yet bloomed in this country. The foliage is fine, each leaf being about twelve inches long and four broad, of a fine deep green. If the flowers should be in proportion and of a vivid colour, it will be a most ornamental climbing plant for the conservatory. Messrs. Rollissons of Tooting possess the plant.

ACACIA KERMESINA.—This new species is in appearance like *A. Julibrissin*, but the flowers, which are produced numerous, are of a fine scarlet colour, and consequently have a very showy appearance. It is also in the possession of Messrs. Rollissons. We also have plants of it.

ESCHORANTHUS INCURVALLIA.—This is a beautiful parasitical plant, producing numerous clusters of orange-scarlet flowers, have a very pretty appearance. It is an interesting plant for the stove or conservatory. Plants are now offered at two guineas each by Messrs. Rollissons.

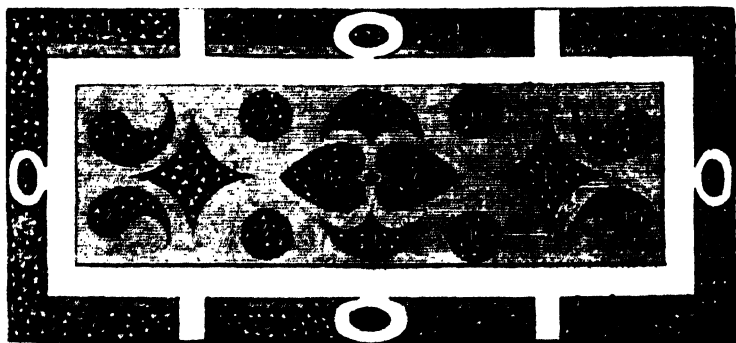
KENNEDIA MACROPHYLLA.—This new species is the most noble in its appearance of any we have seen. Each leaf being about six inches long, of a dark green. The flowers are of a purple-crimson colour. It is a very desirable plant for the greenhouse.

ACACIA CULTRIFORME.—This plant has a most beautiful appearance even without a flower, but it gives an additional beauty to it when loaded with its clusters of fine orange and yellow flowers. It ought to be in every greenhouse or conservatory.

CHOROZEMA LATHOLIA.—This is a fine addition to this interesting and pretty tribe of plants. The plant has not yet bloomed in this country that we have heard of. We saw it only in the collection of Messrs. Rollissons.

PLAN OF THE FLOWER GARDEN AT HILL PARK.—The seat of D. Baillie, Esq., with a list of plants grown in it, from Thompson's Treatise on Hot Water, &c. published by Groombridge.

Knowing that every thing appertaining to Floriculture will be acceptable to our readers, we have extracted from that valuable little treatise of Mr. Thompson's. (late Gardener to the Duke of Northumberland), on the constructing and heating of Greenhouses, &c. the accompanying plan of a



Flower Garden, designed by Mr. Drewett, Gardener to David Baillie, Esq. of Hill Park, with a list of plants recommended by him, for the ornamenting of flower gardens on similar plans.

We are induced to notice Mr. Drewett's plan and mode of embellishing Hill Park Flower Garden, from the recollection of his having spent many years in the Royal Botanic Garden, at Kew, and from his long experience as a practical man, both in this country and on the continent. We with great confidence direct the notice of our readers to Mr. Drewett's system of furnishing beds in flower gardens, it being the opinion of a good practical gardener, of long and great experience.

We shall feel greatly obliged by our correspondents favouring us, from time to time, with any interesting plans for flower gardens, with lists of plants and directions for management.

Names of Plants grown in Hill Park Flower Garden.

No.	No.
1. <i>Anagallis Monelli</i>	white and other light coloured <i>Petunias</i>
2. <i>Anagallis grandiflora</i>	
3. Scarlet <i>geraniums</i> and <i>Delphinium grandiflora</i>	17. <i>Fuchsia globosa</i> and <i>Delphinium sinensis</i>
4. <i>Verbena Drummondii</i> and <i>Antirrhinum major</i>	18. <i>Oenothera Drummondii</i> and <i>Phlox cordata</i>
5. <i>Verbena melindris</i> and double white <i>Antirrhinum</i>	19. <i>Petunia phyllicaulis</i> and <i>Aster ameloides</i>
6. <i>Calceolaria viscosissima</i> , and double white Lillies	20. <i>Petunia phœnicia</i> and <i>Hydrangeas</i>
7. <i>Fuchsia Thomsonia</i> and <i>Delphinium Barlowii</i>	21. Variegated leaved scarlet <i>Geranium</i> , and <i>Delphinium grandiflora</i> .
8. <i>Lantana Sellowii</i> and <i>Verbena aubletia</i>	22. <i>Oenothera missouriensis</i> and <i>Mesembryanthemum floribundum</i>
9. <i>Verbena Arranana</i> and <i>Elscholtzia, crocea</i>	23. <i>Phlox Drummondii</i> and <i>Petunia gracilis</i>
10. <i>Verbena Tweediana</i> and <i>Lobelia lutea</i>	24. <i>Oenothera Drummondii</i> and <i>Campanula latifolia</i>
11. <i>Lobelia erinus</i> and <i>Antirrhinum caryophylloides</i>	25. <i>Calceolaria majoriana</i> and <i>Calceolaria integrifolia</i>
12. <i>Crassula coccinea</i> and <i>Heliotropium peruvianum</i>	26. <i>Phlox reflexe</i> and prince of Orange <i>geranium</i>
13. <i>Verbena aubletia</i> and <i>Mesembryanthemum spectabile</i>	27. <i>Tigridia pavonia</i> and <i>Nolana atriplicifolia</i>
14. <i>Mesembryanthemum blandum</i> and <i>Petunia intermedia</i>	28. <i>Delphinium grandiflora</i> and <i>Oenothera taraxifolia</i>
15. <i>Oenothera macrocarpa</i> and <i>campanula gargeniia</i>	29. <i>Gladiolus psitticinus</i> and <i>Verbena Lambertia</i>
16. Double scarlet <i>Lychnis</i> and new	30. Brighton scarlet <i>geranium</i> and <i>Oenothera macrocarpa</i>

SEALEY'S QUEEN VICTORIA PINK.—Noticed in the August Number, was, in consequence of wrong information sent us, miscalled Tealey's Queen Victoria. (Ed.)

FLORICULTURAL CALENDAR FOR DECEMBER.

PLANT STOVE.—Roses, Honeysuckles, Jasmines, Persian Lilacs, Azaleas, &c. required to bloom from January, should be brought in early in the present month, the plants should be placed at first in the coolest part of the house, never allow them to want water. Pots or boxes containing bulbous

rooted flowering plants as Hyacinths, Narcissuses, Persian Irises, Crocuses, &c., should occasionally be introduced so as to have a succession of bloom. All stove plants will require occasionally syringing over the tops in order to wash off any accumulated dust from the foliage. Cactus plants that have been kept out of doors or in the greenhouse, should occasionally be brought into the stove for flowering.

GREENHOUSE.—As much fire as will barely keep out frost will be necessary and for the purpose of drying up damp arising from foggy nights, or from watering; all possible air should be admitted in the day time; but mind to keep the plants from damage of frost. Chrysanthemums will require a very free supply of air, and a good supply of water; by the end of the month many will be going out of bloom, such should be cut down and if any kind be scarce, the stalks may be cut in short lengths and be struck in heat, always cut the lower end of the cutting close under the joint. If greenhouse plants require watering, or syringing, over the tops, let it be done on the morning of a clear day when air can be admitted, and towards evening a gentle fire heat should be given.

FLOWER GARDEN.—Be careful to protect beds of, what are technically called, Florists Flowers, should severe weather occur. Calceolarias that were cut down and repotted last month will require attention, not to water too much or they will damp off, keep them in a cool and airy part of the greenhouse or pit. Auriculas and Polyanthus will require plenty of air in fine weather, and but little water; the like attention will be required to Carnations, Pinks, &c., kept in pots. Dahlia roots should be looked over to see if any are moulding or likely to damage, let the roots be dry before they are laid in heaps. Newly planted shrubs should be secured, so that they are not loosened by the wind. The pots of Carnations and Picotees should be placed in a situation where they may have free air, and be raised above the ground; if they are under a glass case, it will be much better than if exposed to the wet and severity of the winter, or many will, in all probability, be destroyed. Where it is desirable to leave patches of border flowers undisturbed, reduce them to a desirable size by cutting them round with a sharp spade. When it is desirable to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten week stocks, and mignonette, in pots for blooming early next spring to adorn a room or greenhouse, must not be overwatered, and be kept free from frost. A cool frame, well secured by soil or ashes at the sides, and plenty of mats or reeds to cover at night will answer well. Tender evergreens newly planted, would be benefitted by a little mulch of any kind being laid over roots. During hard frosts if additional soil be required for flower beds, upon grass lawns, advantage should be taken to have it conveyed at that time, so that the turf be not injured by wheeling.

REFERENCE TO THE EMBELLISHMENTS.

IPONEA MAGNIFLORA.—Seeds of this very fine flowering species were sent to a Lady of this Country from India, a seed of which was very obligingly sent us. We shall give some particulars respecting it in our next number, having been sent too late for the present one. (Editor.)

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THE
FLORICULTURAL
C A B I N E T,

AND
FLORISTS' MAGAZINE.

JANUARY TO DECEMBER, 1839.

VOLUME VII.

CONDUCTED BY MR. JOSEPH HARRISON,

NURSERYMAN,

DOWNHAM NURSERY,

NORFOLK.

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PREFACE.

It was with feelings of a most grateful character we presented the former Volumes of the Floricultural Cabinet to our Subscribers ; the continued, and increased support we have received during the course of conducting the present Volume, we are deeply sensible, lays us under additional obligations ; to say we feel thankful to our friends for the support afforded us, does not adequately express our feelings of gratitude ; we will however, by our utmost exertions, endeavour to prove it by doings in our next volume, having made arrangements for its improvement.

In the present volume we have acted upon the principle we set out with, to admit nothing into our pages but what we judged would be really useful to our readers, such will be our aim in future. In accomplishing our object we have been liberally supported by the communications of our friends, grateful to them for the past, we very respectfully solicit their continued aid.

During the past year we have observed that *Flower Gardening* has rapidly progressed, and the amusement of Floriculture has become a dominant passion in every part of Britain ; we rejoice in it, it is in strict accordance with our very ardent wishes as tending to the happiness of man, because Floriculture is not only amusing but beneficial ; it brings reason and observation into operation ; it is favourable to serious meditation ; it exercises the fancy in innocent and elegant occupation ; and braces the system by its beautiful tendency. Kings, Queens, Princes, and Nobles, have, and still do, stamp additional dignity

upon it by seeking recreation in its pursuit.* To the young, we are fully persuaded, it is of lasting importance, it attaches them to home, and casts a charm over the place dedicated to floricultural pursuits, and gives them tastes and feelings which are usually retained through life. That our view of it, is in unison with the most intelligent of our own sex, we make our boast of, but more especially do we congratulate ourselves, when we find they are in accordance with the Ladies of our Country. So much is Floriculture held in esteem by the female sex, that amongst the many accomplishments which adorn them, a love of it is now considered a necessary one.

Its pursuit is now become so general, that it extends nearly to every cottage where it is practicable, and reaches to every Palace, and affords its votaries by its productions, what has been said to be, the purest of human pleasures. Of its enjoyment we have largely participated, and we are thus induced to attempt to contribute to its promotion, that others may more largely share with us of its benefits. To accomplish this, our future exertions will be uniformly directed, and we have reason to anticipate successful results, because by the operation of a supreme hand.

"For us kind nature wakes her genial power,
Suckles each herb, and spreads out every flower !
Annual for us, the Grape, the Rose renew,
The juice nectarious, and the balmy dew ;
For us, the mine a thousand treasures brings,
For us, health gushes from a thousand springs."

Downham, Nov. 20th, 1839.

time. Dioscorides is the only Greek author that notices it; and as he has given no description of the plant or flower, but only tells us that the Persians obtained an oil from a white flower, with which they perfumed their apartments during their repasts, it is probable he only became acquainted with the jasmine during his attendance as a physician on Antony and Cleopatra, in Egypt, whose unbounded luxury would naturally call this essence from the land of odours.

At what time this plant first perfumed the British atmosphere, is uncertain, Mr. Aiton says, in 1548; but we consider it to be much longer acquainted with our soil, as it seems to have been so common in the time of Gerard as to have been considered a native plant by some persons. This excellent author says, "Jesemin is fostered in gardens, and is vsed for arbors and to couer banquetting houses in gardens; it groweth not wilde in Englande, that I can vnderstande of, though master Lyte be of a different opinion: the white jasmine is common in most places of Englande."

If we may believe a Tuscan tale, we owe our thanks to Cupid for the distribution of this pretty shrub. We are told that a Duke of Tuscany was the first possessor of it in Europe, and he was so jealously fearful lest others should enjoy what he alone wished to possess, that strict injunctions were given to his gardener not to give a slip, nor so much as a single flower, to any person. To this command the gardener would have been faithful, had not the god of love wounded him by the sparkling eyes of a fair but portionless peasant, whose want of a little dowry and his poverty alone, kept them from the hymeneal altar. On the birth day of his mistress the gardener presented her with a nosegay; and to render the bouquet more acceptable, he ornamented it with a branch of jasmine. The young nymph wishing to preserve the bloom of this new flower, put it into fresh earth, and the branch remained green all the year, and in the following spring it grew, and was covered with flowers; and it flourished and multiplied so much under the maiden's cultivation, that she was able to amass a little fortune from the sale of the precious gift which love had made her; when with a sprig of jasmine in her breast, she bestowed her hand and her wealth on the happy gardener of her heart. And the Tuscan girls, to this day, preserve the remembrance of this adventure, by invariably wearing a nosegay of jasmine on their wedding day; and they have a proverb which says, that "a young

girl, worthy of wearing this nosegay, is rich enough to make the fortune of a good husband.

Let us then cultivate more abundantly what love has scattered so happily ; for the supple and pliant branches of the jasmine accommodate themselves to numerous situations in the shrubbery :

" Here jasmines spread the silver flower,
To deck the wall, or weave the bower,"

They should be woven into the trellised arch or alcove, climb the palisades, rest on the branches of the broad-leaved laurel, cover the dead wall, and run gaily wild over the shrubs of the wilderness walks ; whilst obedient to the scissars of the gardener, they are formed into bushy shrubs and little trees, for the near approach to the dwelling, where in the morning and evening their star-topped tubes send forth a shower of odours that embalm, refresh, and purify the surrounding air.

" Many a perfume breathed
From plants that wake when others sleep,
From timid jasmine buds, that keep
Their odour to themselves all day,
But, when the sun-light dies away,
Let the delicious secret out
To every breeze that roams about."

T. MOORE.

From the tube of this eastern flower, the bee extracts its most exquisite honey ; and the painted butterfly is never seen to more advantage, than when resting on the delicate petals of the white jasmine.

When the jasmine was first introduced into France, it was supposed to require all the heat they could give it ; it next occupied a place in the orangery, and at length exposed to the open garden, where it thrives as freely as a native plant, and still holds the situation of a favourite with the Parisian belles, and is always the most saleable bouquet that is brought to the French market.

We have often been astonished that our cottagers, who possess little gardens, should not cultivate flowers for sale, particularly the jasmine, which is so hardy and so easily propagated ; and with which they might even form their fences, or suffer it to run over their hedges, without taking away any of their potatoe ground.

In the market they would find one bunch of jasmine flowers would bring them as much money, as three cabbages or a bunch

of turnips. As long back as the time of Charles the Second, Evelyn says, "Were it as much employed for nosegays, &c. with us, as in Italy and France, they might make money enough of the flowers; one sorry tree in Paris, where they abound, has been worth to a poor woman near a pistole a year." And at the present time a great deal of money is made by the nurserymen in that neighbourhood, who trim them up with a head on a single stem, and then pot them, and send them to the flower market covered with blossoms, whereby they soon find customers amongst those who are wise enough to prefer familiar beauty to costly rarity, and you see it there flourishing equally in the cobbler's window and the palace balcony. The Turks cultivate the jasmine for the sake of the branches, of which the tubes of their summer tobacco-pipes are as invariably made, as those for the winter are formed of the cherry-tree.

As the jasmine does not ripen its seed in our climate, it is increased by laying down the branches, which take root in one year, which may then be cut from the old stock, and planted where they are to remain. It is also propagated by cuttings, which should be planted early in the autumn, and the earth covered with sand, ashes, or saw dust, to keep the frost from entering the ground.

In situations where it is necessary to prune this plant, it must never be done until the end of March, or when the frost is past. It should also be observed, that the flowers are always produced at the extremity of the same years' shoots, which are often cut off in the summer, by those that are ignorant of its nature; and thus the plant is deprived of the power of treating us with its fragrant flowers.

The common yellow jasmine, *J. fruticans*, is a native of the south of Europe, yet it did not reach this country so early as the white jasmine, as Gerard tells in 1597, that it had not been seen in this country; and Mr. Martin is therefore mistaken in his statement, that it was cultivated by Gerard in that year.

Parkinson tells us, in 1629, that the yellow jasmine, "will well abide in our London gardens, and any where else."

This shrub is easily increased by suckers or layers, but being deficient of odour, it is much less cultivated than formerly. Sheep eat the leaves and young branches of this shrub with great avidity.

The Italian yellow jasmine, *J. humile*, produces larger flowers than the common yellow jasmine, and is therefore preferred in

the shrubbery; where it requires a south aspect and sheltered situation. It was at first cultivated with us in 1730, but its native soil still remains unknown; it acquired its name from being sent out of Italy with orange trees, &c.

The ancients employed the berries of the jasmine, in their pretended divinations; and the oil obtained from the flowers was used in the baths of females.

CLERICUS.

ARTICLE II. •

A SELECT LIST OF THE MOST BEAUTIFUL FLOWERING GREENHOUSE PLANTS, BY W.J.C.

SPRINGFIELD, NEAR CHELMSFORD, ESSEX.

I HAVE often remarked in most of the Numbers of the '*Floricultural Cabinet*' a vast amount of *Queries* unanswered, in several of which, I took great interest; but my hopes have been disappointed by their being neglected and passed over without any notice taken of them. Now, I think one of the best and surest plans to increase the circulation of the '*Cabinet*,' is, freely and punctually to answer every *Query* put in the preceding Number; by such means, the knowledge of the cultivation will be more diffused, and consequently, the love of floriculture will increase in an equal ratio with the success of the cultivator.

To remedy this defect, I shall at intervals inform your numerous readers of the mode I have adopted with respect to several *Queries*, that is, if you think it worth insertion; mind, I do not pretend to a thorough acquaintance with floriculture in general, only upon a few things I have been singularly successful.

I am glad you have adopted the plan of noticing the various plants in the hothouses and greenhouses round the metropolis, it gives your numerous readers an early and useful account of the latest and most beautiful productions, which increases amongst amateurs, the desire of adding to their collections plants of approved beauty; by the continuation of this plan, and adopting my suggestions respecting the *Queries*, you will oblige me, and a host of your readers.

For the information of your readers I enclose a select list of greenhouse plants, the beauty of which I can answer for, having

them in my possession, and exhibited at various shows : against those which require particular treatment I have marked a number, upon referring to the bottom of the list it will be explained.

W. I. C.

List of Greenhouse Plants.

Acacia cordata.	Bouvardia triphylla
“ pubescens	Brachysema latifolia
“ armata	Burchillia capensis
Alstrameria tricolor	Burtonia conferta(4)
“ pelegrina	Cactus speciosissimus
“ simsi	“ Jenkinsonia
“ aurea	“ Ackermania
“ psittacina	Calothamnus quadrifida
Amaryllis Johnsonia(1)	Chorizema cordata(5)
“ crocea vitalina(1)	“ ovata(5)
“ speciosa(1)	“ Henschmannii(5)
“ vittata(1)	Cistus creticus
“ formosissima(1)	“ speciosa
Anagallis monelli	Clanthus puniceus
“ grandiflora	Clerodendron speciosissimum
“ Philpsii	Crassula coccinea
Anomatheca cruenta	“ falcata
Anthocercis viscosa(2)	“ versicolor
Azalea indica alba(3)	Crotolaria elegans
“ Phœnicea(3)	Crowea saligna
“ Viscosa(3)	Cyrtilla pulchella
Baurea rubioides	*Cyclamen coum
Beaufortia decussata	“ persicum
Berberis dulcis	“ europeum
Baronea pinnata	“ verum
“ serrulata	Cytisus racemosus
Bosicea linophylla	Daphne odora
“ rufa	“ Cneorum

(1) Must be kept near the glass, and have rest during winter months.

(2) Will not bear much water.

(3) Require the tops to be ~~wear~~ glass, which will cause them to bloom well, water freely.

(4) Near the side panes of glass in the house, so as it may have plenty of light and air.

(5) In the warmest part of the greenhouse, and must be kept from currents of air, also as near the side panes as possible.

*There is another Cyclamen still more beautiful than the above, called, C. repandum, but procured with great difficulty.

<i>Daviesia acicularis</i> (6)	<i>Hoya carnosæ</i>
<i>Dentzia scabra</i> (7)	<i>Indigofera australis</i> (10)
<i>Diosma umbellata</i>	<i>Kennedia coccinea prostrata</i>
“ <i>imbricata</i>	<i>Linum flavum</i>
“ <i>ceratoides</i>	“ <i>trigynum</i>
<i>Durantia Elisii</i>	<i>Lautana sellowii</i>
<i>Erythrina crista galli</i>	“ <i>mutabilis</i>
“ <i>laurifolia</i>	<i>Lechenaultia speciosa</i> (11)
<i>Epacris variabilis</i> (8)	“ <i>formosa</i> (11)
“ <i>impressa</i> (8)	<i>Loasa lateritia</i>
“ <i>nivalis</i> (8)	<i>Lychnis fulgens</i>
“ <i>grandiflora</i> (8)	“ <i>coronata</i>
<i>Eutaxia myrtifolia</i>	“ <i>Bungeana</i> (12)
<i>Fuchsia fulgens</i>	<i>Magnolia fuscata</i>
<i>Gardoquia Hookerii</i>	<i>Mannettia glabra</i>
“ <i>multiflora</i>	<i>Mahernia pinnata</i>
<i>Galphimia glauca</i>	<i>Metrosideros florabundus</i> (13)
<i>Genista canariense</i>	<i>Nierembergia Philicaulis</i>
<i>Glycine bimaculata</i>	“ <i>intermedia</i> (14)
<i>Gladiolus florabundus</i>	<i>Pittosporum Tobira</i>
“ <i>colvillii</i>	<i>Primelea decussata</i>
“ <i>cardinalis</i>	<i>Polygala oppositifolia</i>
“ <i>psittacinus</i>	“ <i>grandiflora</i>
<i>Gloxinea cautescens</i>	“ <i>speciosa</i>
“ <i>speciosa</i>	<i>Prostranthera violacea</i>
“ <i>alba</i>	<i>Puttenia stricta</i> (15)
<i>Grevillea buxifolia (curious)</i>	<i>Rhexia marinana</i>
<i>Hibbertia volubillis</i>	<i>Ruellia formosa</i> (16)
<i>Hovea celsi</i> (9)	“ <i>ciliata</i>
“ <i>purpurea</i> (9)	<i>Sedum Sieboldii</i>

(6) Small pot and plenty of water.

(7) Almost hardy.

(8) All the *Epacridæ* require plenty of water at all times, in potting them very sandy peat must be used, chopped fine and not sifted.

(9) Plenty of water.

(10) Plenty of water.

(11) I have been very successful with these flowers, they must be kept as close to the glass as possible, not watered over the foliage. and plenty of light, not too much water, potted in very sandy peat chopped.

(12) Must be grown in rich leaf-mould with old saw-dust, and potted from large 48's to 32's, to 24's. and lastly, to 12's; mine was 9 feet high, with fifty-seven blossoms on.

(13) The smaller the pot the more abundantly will it flower.

(14) Must be kept separately as it is inclined to be infested with the *Aphis*.

(15) Small pot, plenty of water.

(16) Hottest part of the greenhouse, free from draft, and use but little water during winter.

Selago Gilliesii
Sollya heterophylla
Solanum spinosum
Springelia incarnata(17)
Stenochilus maculatus
Streptocarpus Rexii
Sutherlandia frutescens

Swansonia coronillæfolia rosea
 “ “ *alba*
Tecoma australis
 “ *capensis*
Templetonia glauca
Tropaeolum tricolorum

N.B. Should any of your readers require the color of the flowers, I will send you a list as soon as I have leisure; my next communication will be on the Cold Pit, one of the most useful structures known, I have one on a principle of my own in which I have placed my Camellias, but as it is an experiment, I shall not notice it until I see how the plants have weathered the winter.

W.I.C.

ARTICLE III.

ON RAISING SEEDLING HEARTSEASE.

BY A. E., Hoxton.

I BEG leave to submit to the readers of the Floricultural Cabinet the mode by which I have raised seedling Heartsease. In saving the seed it is quite necessary that it should be gathered from first rate flowers, and that no common or small flowers, should be grown in the garden, or if possible near the plants from which the seed is to be gathered. The pods containing the seed must be taken from the plants, when they have grown to their full size, and before they are quite ripe, spread on a large cloth and placed it in a sunny aspect, as if you waited till they were quite ripe, the seed vessels fly open, and disperse the seed, so that it is quite necessary that the cloth on which you spread the seed to ripen should cover a good space, otherwise you will lose half your seed. It will be quite ripe in August and September. The end of January I make a hot bed with stable manure, and place on it a small one-light frame; when the heat has declined, I put a layer there inches deep of fresh loam and rotten leaves, (of each an equal part) well mixed together, and then sow the seed; when they

(17) Plenty of water—near the glass—peat with sand chopped fine.

come up I give them all the air I can in fine weather, keeping the same shut in frosty weather, and at night.

In May, they have got large enough to plant out. This season I planted under a row of standard apple and pear trees (having first dug in some decayed vegetable mould) and though under the shade of the trees, I have had all the autumn, and to the present time, one mass of bloom, bidding defiance to the season, and hardly what may be called an indifferent flower, and among them, at least a dozen of those of first rate.

I grow a great profusion of border flowers, but the first flower that strikes the attention of any visitor, and particularly females, is the Heartsease; to me, the watching of the first bloom, with the expectancy of rearing something new, creates a much greater pleasure than viewing a bed of known good flowers.

If any flower is required to show what can be done by cultivation, let it be the Heartsease; take the plant growing in its natural wild state on the West of England mountains, and compare it with the present garden flower. It is my opinion that the cultivation of this beautiful plant will be greatly improved, and in a few years will far surpass those of the present day.

A. E.

ARTICLE IV.

ON THE FOOD OF PLANTS

BY TERRA.

WE are lost in wonder and astonishment when we contemplate the means by which plants are supported and the different soils that are requisite to bring the different species to perfection, some delighting to grow in rich soils, others on barren wastes, some in warm countries, others in the higher latitudes, all receiving that nourishment which is best suited for the propagation of their species, and in those places that are best adapted to their nature. When we consider a plant as an object possessing vegetable life, that it is organized, possessing an apparatus, by means of which its several functions are exercised; that light, air, and moisture, are essential to its existence, and that no sooner is life extinct, than the laws of chemistry, which hitherto were over-ruled by that principle, exert their influence;—it is decomposed, and having

passed into its original elements, is fitted for becoming the support of other organized beings.

In these respects plants bear a close analogy to animals; like them too, they are possessed of that inconceivable power, by which means they are enabled to assimilate, or change into their substance, a variety of extraneous matter. In common with animals, they have the power of increasing their species: and many of them possess spontaneous motion, or irritability. Indeed, the lowest link in the chain of vegetable beings, approaches so closely to that which holds the same in the animal kingdom, that a well defined line of demarkation has in vain been sought for.

It has occupied the attention of philosophers for a long period to discover the real nature of the food of plants, nor to this day is the problem satisfactorily solved. It would, however, lead me far beyond the limits which I have proposed to myself in this outline to notice the conflicting opinions of those who have investigated this difficult subject; let it suffice to observe, that the most generally received is, that water, together with carbon, (the base of charcoal,) either in solution, or combined with an acid gas, constitute the principal food of vegetables; and that the application of manure, consisting of decaying vegetable and animal matter, to the soil, is the only means within our power, of supplying the plant with the latter of these essential principles.

The earths, which are only finely divided flint, limestone, alumine, or earth formed from clayslate and analogous rocks, and a few others of less common occurrence, do not constitute any portion of the food of plants, the use of them being merely to afford a medium in which the proper food should be administered; and their fitness for the purpose, depends both on the proportion in which they are combined, and the state of division which they have attained. Thus, a soil is composed principally of silex, that is, earth of flints, particularly if some portion of it be not in a state of minute division, will not be sufficiently compact to retain for any length of time, a proper degree of moisture. A soil consisting of nineteen parts out of twenty of siliceous sand, has been found to be perfectly barren, yet so small a portion of finely divided matter, as one part in twelve, it is asserted, is sufficient to adapt it to cultivation. The qualities whereby this sand may be recognised, are, that it does not effervesce in acids, that it is

harsh when rubbed between the finger and thumb, and it cuts glass if rubbed against it.

Alumnia, so called, as constituting the base of alum, occurs generally in the form of stiff retentive clay; without a certain proportion of sand, it will scarcely admit water, and consequently an unfit medium for vegetables; but it does not occur in a state of absolute purity and minute division, and though it frequently requires an additional portion of sand, to render it a proper stage for vegetables, but I am not aware of its being absolutely barren. The agricultural character given of this clay, in Conybeare and Phillips's invaluable work on the Geology of England and Wales, is, that "it chokes the plough, and it rolls before it, in a broken and muddy state; after rain, it is not slippery, but adheres to the shoes; after drought, it presents cracks nearly a yard in depth and several inches in breadth. According to Townsend, it is sometimes called wood grower's land, because, although it is productive of the finest elm, oak, and ash timbers, it requires chalk before it can produce good corn; yet on Epping forest, Windsor forest, and much of the New Forest, the oaks are finest where clay is mixed with sand." It does not effervesce in acids, and when in a state of minute division, is unctuous and impalpable to the touch. It is known by the terms, argillaceous, clay, stiff retentive clay, &c.

Calcareous earth results from limestone or chalk; in the former case, the soil is always mixed with other ingredients, and is naturally suited to agricultural purposes, hence the extraordinary fertility of many of the Irish counties. In the latter, it is occasionally very indifferent even in England, but on the continent, according to Cuvier and Brongniart, "sterility is one of its most decided characters, and Champagne is mentioned, as being, in some cases, absolutely uninhabitable." It is easily distinguished from the last, by its effervescing in acids. Besides these, there are six other enumerated by chemists, only one, (magnesia) is found in sufficient quantity to modify in any considerable degree the general nature of the soil.

It therefore appears that pure silica, alumina, or lime, are not capable of supporting vegetation. It is the opinion of an eminent French chemist, that the most fertile soils will be generally found to consist, as nearly as possible of four parts of clay, three of sand, two of calcareous earth, and one of magnesia.

TERRA.

ARTICLE V.

ON CHINESE GARDENS.

(Continued from Vol. VI. page 169.)

WHERE the ground is extensive, and many scenes are introduced they generally adapt each to one single point of view; but where it is confined, and affords no room for variety, they dispose their objects so, that being viewed from different points, they produce different representations; and often such as bear no resemblance to each other. They likewise endeavour to place the separate scenes of their compositions in such directions as to unite, and be seen all together, from one or more particular points of view, whence they may be delighted with an extensive, rich, and variegated prospect.

They take all possible advantage of exterior objects, hiding carefully the boundaries of their own grounds; and endeavouring to make an apparent union between them, and the distant woods, fields, and rivers; and where towns, castles, towers, or any other considerable objects are in sight, they artfully contrive to have them seen from as many points, and in as many various directions as possible. The same they do with regard to navigable rivers, high roads, foot-paths, mills, and all other moving objects, which animate and add variety to the landscape.

Beside the useful European methods of concealing boundaries by ha-has, and sunk fences, they have others still more effectual. On flats, where they have naturally no prospects of exterior objects, they enclose their plantations with artificial terraces, in the form of walks, to which you ascend by insensible slopes; these they border in the inside with thickets of lofty trees and underwood; and on the outside, with low shrubberies, over which the passenger sees the whole scenery of the adjacent country, in appearance forming the continuation of the garden, as its fence is carefully concealed amongst the shrubs that cover the outside declivity of the terrace.

And where the garden happens to stand on higher ground than the adjacent country, they carry artificial rivers round the outskirts, under the opposite banks of which, the boundaries are concealed among trees and shrubs. Sometimes too the use of strong wire fences, painted green, fastened to the trees and shrubs that border the plantations, and carried round in many irregular directions, which are scarcely seen till you come very near them;

and wherever ha-has, or sunk fences are used, they always fill the trenches with briars and other thorny plants to strengthen the fence, and to conceal the walls, which otherwise would have an ugly appearance from without.

In their large gardens they contrive different scenes for the different times of the day; disposing at the points of view, buildings, which from their use, point out the proper hour for enjoying the view in its perfections: and in their small ones, where, as has been observed, one arrangement produce many representations, they make use of the same artifice. They have beside, scenes for every season of the year; some for winter, generally exposed to the southern sun, composed of pines, firs, cedars, evergreen oaks, phillyreas, hollies, yews, junipers, and many other evergreens; being enriched with laurels of various sorts, laurestinus, arbutus, and such other plants and vegetables as grow or flourish in cold weather; and to give variety and gaiety to these gloomy productions, they plant amongst them, in regular forms, divided by walks, all the rare shrubs, flowers, and trees of the torrid zone, which they cover during the winter, with frames of glass disposed in the forms of temples, or other elegant buildings.

Those who are acquainted with the natural history of China know that it produces almost all the plants and vegetables cultivated in Europe with many others, that are not to be found even in the very best hothouses, amongst which are several evergreens, as the Tse-song, the leaves resemble both the juniper and cypress, mixed in a very beautiful manner; the Mo-lyen, producing large flowers, like lillies, some yellow, some red, and some white, which open in December, and flourish during the greater part of the winter; the La-mew, a kind of bay, producing fine yellow flowers, that appear in winter, with many others, which as they cannot here be obtained, it is superfluous to enumerate.

What they call their conservatories, are warmed by subterraneous fires, and afford a comfortable and agreeable retreat, when the weather is too cold to walk in the open air.

All sorts of beautiful melodious birds are let loose in them; and they keep there, in large porcelain cisterns, placed on artificial rocks, gold and silver fishes; with various kinds of the Lyen-wha, which is a water-lilly, much esteemed in China. In the province of Kiang-si, whose lakes are covered with it, in a very beautiful manner, and it is cultivated by all the great lords in ponds and

cisterns, for the decoration of their courts and gardens. The flower resembles a tulip, and is either yellow, white, violet, crimson, or streaked with various colours; its smell is very pleasing, and the fruit which produces a kernel, being accounted a great restorative and strengthener, is given in China as a medicine, after severe fits of illness; the leaves are large, of a circular form, and brilliant green colour; they float upon the surface of the water, they have a great many other aquatic plants and flowers. They also raise in them strawberries, cherries, figs, bananas, li-chis, grapes, apricots, and peaches, which cover the wood-work of their glass frames, and serve for ornament as well as use.

The fruit of the Li-chi resembles the berry of the arbutus, in every thing but size; its being as large as a pigeon's egg, and full of a juicy pulp, that in flavor, far surpasses any other fruit whatever.

Their scenes of spring likewise abound with evergreens, interspersed with lilacs of all sorts, laburnums, limes, laraixes, double blossomed thorn, almond and peach trees, with sweet brier, early roses and honey-suckles. The ground, and verges of the thickets and shrubberies, are adorned with wild hyacinths, wall-flowers, daffodils, violets, primroses, polianthus, crocus, daisies, snowdrops, and various species of the iris; with such other flowers as appear in the months of March and April, and as these scenes are also scanty in their natural productions, they intersperse among their plantations, menageries of all sorts of tame and ferocious animals, and birds of prey: aviaries and groves, with proper contrivances for breeding domestic fowls; decorated dairies, and buildings for the exercise of wrestling, boxing, quail-fighting, and other games known in China. They also contrive in the woods large open recesses for military sports; as riding, vaulting, fencing, shooting with the bow, and running.

(To be continued.)

ARTICLE VI.

REMARKS ON THE ROSE.

(Continued from Vol. VI. page 286.)

THE double yellow rose, *sulphurea*, was unknown to us in 1597; but the single yellow brier was then common, as we find by Gerard.

The single yellow rose, *lutea*, blossoms freely in most situations, excepting in the vicinity of London, or other confined spots.

The double yellow rose, where it blossoms freely, is one of the most elegant flowers that any country has produced, and had nature bestowed on it the perfume that makes the Provence rose so delightful, it would be pronounced the acme of Flora's skill.

The outer petals are of the most delicate golden yellow, whilst the inner ones are often of a tint approaching to copper colour, and so delicately transparent, as even to surpass the carnation poppy in texture; and although the flower is exceedingly double, yet the petals hang with a looseness and elegance that cannot be conceived without beholding it. Van Os, the elder, has been the most happy among painters in giving that transparent and crumpled effect to this rose, which Von Huysum himself could never perfectly accomplish. Sydenham Edwards has left a faithful representation of the double yellow rose, which is given in the Botanical Register.

We remember this species of rose much more common than at present growing in open situations, and we have generally observed that it has prospered best in an eastern aspect, where buildings or shrubs, have sheltered it from the mid-day sun. It loves a light soil, of a gravelly or sandy nature, but cannot endure a confined or wet situation. We have seen it in great perfection in a garden at Petersfield, in Hampshire; and it prospers and flowers very freely in some parts of the South Downs, particularly at Findon in Sussex. It seems much less affected by the cold than by low and damp situations; and we do not recollect having met with it in flower except in spots open to the east, which is generally considered the most pernicious to plants. The foliage of the double yellow rose is small, and of a beautiful bluish green, very light on the under side, whilst the stalks being of yellow-green, form a delightful graduation to the golden flower.

THE EVER BLOWING CHINA ROSE.—*Semperflorens*.

When this species of rose was first introduced, in 1780, it was considered to be so delicate a plant, that it was kept constantly in the stove, and the smallest cuttings were sold for many guineas

each. It was soon found to thrive in a common greenhouse, where it was found to blossom the whole winter, to the great admiration and amazement of all who could obtain sight of this far-fetched flower. As it was found to be so easy of propagation, in a few years every country casement had the pride of sheltering this Chinese prodigy, until the cottager for want of pence to purchase flower pots, planted it in the open ground; when, as if it gloried to breathe the air of this land of liberty, it soon surpassed in strength and beauty all the inmates of the "gardens, in which art supplies the fervour and the force of Indian skies."

We have no plant on record, either of utility or beauty, that has spread itself so rapidly over the whole country as this rose has done in our own age. It now climbs up to look into the attic windows of those very houses where we once saw it peep out at the lower casement; and it is not uncommon to see its petals blush through a veil of snow, in the month of December; a thing so unusual formerly, that no longer back than the year 1800, Mrs. Mary Robinson wrote the following verses on seeing a rose in flower at a cottage door on Egham-hill, on the 25th of October of that year.

"Why dost thou linger still, sweet flower?

Why yet remain, thy leaves to flaunt?

This is for thee no fostering hour.

The cold wind blows,

And many a chilling, ruthless shower.

Will now assail thee, beauteous rose!

Although it is acknowledged that few plants contribute more agreeably to ornament our shrubberies in the autumnal months than this Chinese rose, yet we would not wish it to exclude or lessen the cultivation of the older and more beautiful species, but which, we fear, it has already done to a considerable degree. As the smallest cuttings of this rose will grow, we are not without the hope of seeing it creep into our hedge rows, where it would soon propagate itself both by suckers and seed; for it ripens its fruit in this climate, as perfectly as those of our native briers, and the hips of the Chinese rose are particularly ornamental, from their inverted pear shape, fine orange colour, and large size.

(To be continued.)

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

ANIGOZANTHUS FLAVIDA; var. **BICOLOR**. Two-coloured yellow-haired
Anigozanthus Bot. Reg. 64.

HAMODORACEÆ. HEXANDRIA, MONOGYNIA.

1. A handsome variety of *A. flavida*, which it much resembles in growth and shape, but is much superior to that kind, by the striking beauty of its colours, scarlet and green, which are so blended together as to produce a rich effect, which is rarely the case when the two beautiful colours in question are united in the same flower. We were favored a short time ago by a kind friend with a package of seeds collected in New Holland, and amongst them, we notice, are several species of this genus, which from the description attached, we are led to believe, are entirely new.

CATLEYA GUTTATA; var. **RUSSELLIANA**. Lord E. Russell's spotted *Cattleya*. Bot. Mag. 3693.

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

2. This very beautiful variety of *C. guttata* was originally given by the Director of the Botanic Garden at Rio, to Lord Edward Russell, Captain in the Royal Navy, who introduced it into the collection of Woburn Abbey, where it blossomed for the first time in this country in August last. It is highly deserving of a place in every collection of select orchidæ. The flowers are five inches across, the petals are of a fine greenish brown, spotted with purple, and the lip of a beautiful delicate rose colour. Requires the same treatment as other species.

COLLINSIA HETEROPHYLLA. Variable-leaved *Collinsia*. Bot. Mag. 3695.

SCROPHULARINÆ. DIDYMANIA ANGIOSPERMIA.

3. This species forms an improvement upon *G. bicolor*, on account of the blossoms being much larger, but in other respects, it bears a very great resemblance to that species. It was sent last spring by Mr. Buist from Philadelphia to the Edinburgh Botanic Garden. Seeds of it will, we doubt not, soon be offered to the public.

COMPARETTIA COCCINEA. Scarlet *Comparettia*. Bot. Reg. 68.

ORCHIDACEÆ. GYNANDRIA. MONANDRIA.

4. A very splendid epiphyte, and was introduced by Messrs. Loddiges from Brazil. Doctor Lindley, however, conjectures some mistake is made in this, as he has received specimens which were collected in Xalapa. The blossoms are about the size of *Oncidium flexuosum*, but of a brilliant scarlet

colour, and have a very curious appearance from spurs, of about half an inch in length, produced from their sepals. Of this genus there are only at present three known species, all of them found growing upon trees in Peru; it was named in compliment to professor Comparetti, of Padua, author of a Treatise upon Vegetable Physiology, &c,

DENDROBIUM SULCATUM. Furrowed Dendrobium Bot. Reg. 65.

ORCHIDACEÆ GYNANDRIA MONANDRIA.

5. Collected in India by Mr. J. Gibson, and forwarded to Chatsworth, in the collection at which place it bloomed in April last. It is a handsome species, producing yellow flowers, somewhat resembling *D. Griffithianum*. The culture required is similar to other species of this genus.

EPIDENDRUM BICORNUTUM. Two-horned Epidendrum.
Paxton's Bot. Mag.

ORCHIDACEÆ. GYNANDRIA, MONOGYNIA.

6. A delicate and beautiful Epiphyte, possessing a delightful fragrance, and was first received into the Botanic Garden, Liverpool, several years ago. So long ago as 1833, we had a drawing taken from a plant that blossomed in the valuable collection at Wentworth House, where Orchidææ is cultivated to such a degree of perfection as we rarely see. The blossoms are about two inches across, of a delicate white colour, the base of the lip is yellow, spotted with pale rosy purple. Requires similar treatment to other species.

ÆSCHYNANTHUS GRANDIFLORUS. Great-flowered Æschynanthus.
Pax. Mag. Bot.

CYRTANDRACEÆ. DIDYNAMIA, ANGIOSPERMIA.

7. This is another beautiful Epiphyte, introduced from India by Mr. John Gibbon, who found it growing abundantly at the base of the Khoseca Hills in valleys remarkable for their humidity and shade. The flowers are of a brilliant red, produced in great profusion, and large clusters, which altogether render the plant a very desirable and ornamental object. It is best cultivated in reduced moss, with a little heath soil, potsherds, and plenty of drainage. When growing, it requires an abundant supply of water. When the growth is completed, it should be removed into a cooler situation, and kept comparatively dry, which will be conducive to much stronger blossoms the succeeding season.

NEW PLANIS.

TRICHOCENTRON IRIDIFOLIUM. Orchidææ. Received by Messrs. Loddiges' from Demerara. The plant is of a small habit, having pale yellow flowers, with a lip delicately streaked with dark yellow.

(Bot. Mag.

ANNESLEA TOWENTOSA. This pretty flowering plant has recently been in flower at Mr. Knight's nursery, King's Road, Chelsea. The foliage of the plant is very similar to *Clianthus puniceus*, and has a very pretty appearance. The flowers are produced numerously, in large clusters at the ends of the shoots; and having beautiful pink colored filaments, produces an interesting appearance.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

A SUBSCRIBER would be much obliged by receiving answers to the following questions:

1. Can any thing be done to prevent the flower buds of Camellias from dropping off? great attention has been paid with regard to air, soil, and watering.

(See excellent articles in former Numbers of the Cabinet on Camellias.)

2. Can heath cuttings be struck in a greenhouse; if so, when is the best time and manner of raising them?

(An article will be given next month upon it.)

What is the best remedy for grass that abounds with moss?

(Sprinkle fresh slacked lime liberally over it, and let it be brushed in with a besom, and the moss will be destroyed whilst the grass will be encouraged.—CONDUCTOR.)

Dec. 6th, 1838.

H.

A LIST OF SELF COLOURED AURICULAS.—Will the Editor or some Reader of the Cabinet have the kindness to give me a list of the names, and any particular properties of some of the best self-coloured Auriculas.

AUDATE.

REMARKS.

CORBETT'S HYGROTHERMANIC APPARATUS.—A printed prospectus of this mode of heating has recently been inserted in our Advertising Sheet. It differs from all the various modes hitherto made public of heating by hot water, in circulating the fluid in open gutters instead of pipes. Hence it can only be applied in cases where the gutters can be conducted on a level; but the water may easily be carried over a door, on a siphon principle, or under it, on the principle of water always finding its level. The advantages of this mode, Mr. Corbett says, are cheapness, simplicity, and efficiency. Cheapness, because iron gutters are cheaper than iron pipes; simplicity, because water running in open gutters has less of mystery about it than water concealed in pipes; efficiency, because it produces a moisture heat than any other mode. It has been stated it would produce too moist a heat for many purposes, particularly in the autumn; but Mr. Corbett says that this is not the case, as it has been most fully verified where the plan has been in operation, as at Sir William Call, Bart., Whitford House, near Callington Cornwall; C. Thurtle, Esq., Stoke House, near Plymouth; and at Mr. Puntney's Nursery, Plymouth. There never can be a superabundance of moisture, provided the gutters are of a proper shape; but, should it be considered advisable at any time to prevent the escape of vapour altogether, this may at once be effected by placing along the top of the gutter any flat substance, such as slates, tin plate, &c.; the water never being in a boiling state, the vapour is not forced out, but will condense on any subject with which it comes into contact.

For forcing vines, pines, &c., it is admirably adapted; and, with broader and shallower gutters to produce more moisture, there is reason to conclude that this system will come into general use for the cultivation of cucumbers, melons, &c. For hot-house plants, and particular *Ochidææ*, gutters as broad or even broader than deep, are proved to be most suitable. For the greenhouse it will be of incalculable service. Every description of artificial heat without moisture has been found by sad experience to injure greenhouse plants, when hard weather has compelled its introduction. To many, and particular to Cape heaths, it is almost certain death; because the air in frosty weather, containing, perhaps, not one grain of moisture per cubic foot, and raised by fire to 40°, and sometimes even higher, becomes so intensely dry and oppressive, and acquires such an affinity for moisture, even at this low temperature, that the rapid absorption while the plants are in a dormant state causes their juices to be elaborated too quickly for their powers of secretion."

Not content with recommending his mode as the best of all modes for heating houses in which plants are grown, Mr. Corbett makes a long quotation from Dr. Ure's article published in the transactions of the Royal Society, and, with some variations, in the Architectural Magazine, vol. i. p. 181., on the effects of dry air on the officers engaged on duty in the long room of the Custom House, London; and he arrives at the following conclusion:—

"It is evident, then, that the great desideratum for heating apartments, &c., is, an apparatus capable of circulating, in any direction, and to any extent required, any quantity of artificial heat without the malaria of the stove and pipes, so as to maintain a genial warmth and wholesome ventilation throughout the building. Such a system is now placed before the public, capable of such modifications as to become every way suited to effect these desirable objects; equally adapted to horticultural purposes generally, and to public buildings, offices, and domestic apartments: calculated alike to maintain the healthy and vigorous tone of the animal as well as the vegetable economy; and on a principle whose operations are more assimilated to Nature's own atmosphere than any other method hitherto discovered."

It is quite right that this mode of heating plant houses should, like every other, have a fair trial; but the idea of heating apartments to be occupied by human beings, with hot water in open troughs, is too palpably absurd to deserve a moment's consideration. Others, however, entertain a different opinion on this subject to what we do. At a meeting of the Plymouth Horticultural Society, held July 19., the Rev. C. T. Collings in the chair, "a neat model of Mr. Corbett's Hygrothermanic apparatus, for heating hot-houses, &c., was exhibited; an invention which the late president of the Plymouth Horticultural Society, Thomas Woolcombe, Esq., says, "will do more for the advancement of horticulture than anything which has been produced for the last century."

The peculiar characteristic to this invention (for which the Plymouth Society awarded their gold medal) is its completely obviating the disadvantages usually attending the production of artificial heat; viz., a hot denicacted atmosphere, which elaborating the juices of plants more rapidly than they can be secreted, is always injurious and sometimes destructive. To remedy this evil, which has always been a barrier to the success of exotic horticulture, Mr. Corbett produced his apparatus, the actions of which so closely resemble the operations of nature, that an imitation of whatever is required may be obtained.

The machine consists of two connected vessels, a boiler and an upright tube, with a continuation of open troughs or gutters. Heat is applied to the boiler, the water rises and traverses the gutter, giving out moisture in direct proportion to its heat. The density of the fluid being increased in its passage, it returns again to the bottom of the boiler, and by this means a

constant circulation is effected. The apparatus is as simple as it is complete and economical, and will, without doubt, be very generally adopted in horticultural buildings. Mr. Corbett is foreman at Mr. Pontey's nursery, Plymouth, where the apparatus is in operation.

PROTECTING FLOWER SEEDS, &c., FROM BIRDS, BY MEANS OF BLACK THREAD OR WORSTED.—It has been very satisfactorily proved, this summer, under my own observation, that Mr. Anderson's (of the Botanic Garden, Chelsea) discovery of black thread being a far better protection against the depredations of the house-sparrows in gardens than thread of any other color, is much more serviceable than it was found to be by Mr. Anderson himself. That indefatigable guardian of his plants could not secure the flowers of his extensive collection of crocuses from the attack of sparrows by any means he could devise, until he employed black lines, stretched over the flowers; which proved a complete defence.

The effect of black lines is attributable to their invisibility till the birds are seated under them; but looking up, they are terrified at what they fear is a snare suspended over them, and immediately fly away.

NEW AND RARE PLANTS

RECENTLY INTRODUCED.

CYANOTIS AXILLARIS. Messrs. Rollinson's of Tooting, have recently had this new plant in bloom, it has the appearance of a *Tradescantia*, producing a profusion of beautiful blue flowers. It is an interesting hot-house plant.

CYTISUS NUBIGINENSIS. This new species is blooming profusely in the green-house of Mr. Young's, Epsom nursery. The plant is of a slender habit, but produces numerous clusters of white flowers, hanging pendant at the ends of the shoots; they are delightfully fragrant. It deserves a place in every collection, especially so as it blooms at the present season of the year.

MALVA MARITIMA. This very neat species has been in bloom in the superb collection of Mrs. Marryatt's, Wimbledon. The flowers are white with a dark eye, having a very pretty appearance. It is a pretty plant for the flower garden.

BIPHORIA LONGICORNIS. Orchideæ. Imported from Demerara by Messrs. Loddiges'. The flowers are orange spotted with brown, and are produced in a raceme very much resembling *B. aurantiaca*. (Bot. Reg.)

BOLBOPHYLLUM CUPREUM. Mr. Cumming sent this species from Manila, to Messrs. Loddiges'. The flowers have a scent very like Valerian root. They are of a copper color. (Bot. Reg.)

CATASETUM PORIFERUM. Orchideæ. Mr. Schomburgk sent this remarkable species from Demerara, to Messrs. Loddiges'. The flowers have much the appearance of *C. deltoideum*, being green, beautifully spotted with deep purple. (Bot. Reg.)

CELOSYNUS OVALIS. Orchideæ. Dr. Wallich sent it from Nepal to Messrs. Loddiges'. The flowers are beautifully striated with dark crimson. (Bot. Reg.)

CEPHURIA OCCULTA. Orchideæ. Synonym. *Goodyera occulta*. Messrs. Loddiges' received it from the Mauritius. The flower stem rises about a foot high, producing spikes of white and green flowers.

JONOPSIS TRANA. Messrs. Loddiges' received it from Demerara. The flowers are striped with a delicate lilac.

LYCOPUS PENDULA. Messrs. Loddiges' received it from India. The flowers are green, small, produced on a raceme about a foot long.

CŒLOGYNE MACULATA. Orchideæ. Received by Messrs. Loddiges' from India. The flowers are white, beautifully blotched and spotted with dark colors, producing a very striking appearance.

MAXILLARIA MACROPHYLLA. Orchideæ. Imported by Messrs. Loddiges' from Columbia. It much resembles *M. Deppii*. The petals are of a pale straw color, sepals green outside, brown inside, labellum spotted with crimson. Each flower is about three inches across, and has rather a disagreeable scent. (Bot. Reg.

MAXILLARIA PORRECTA. Orchideæ. Received by Messrs. Loddiges' from Rio Janeiro. The flowers are of a pale buff, having the petals and sepals tipped with dull red. (Bot. Reg.

MORNODON PARDINA. Orchideæ. J. Bateman, Esq., Knypersley Hall, received this species from Baron Karwinski, who discovered it in Oaxaca. The habit is very robust, being three times the size of *M. atropurpurea*. The flowers are of a beautiful primrose, spotted entirely over with reddish purple, and are delightfully fragrant. G. Barker, Esq., of Springfield House, Birmingham, has had the same species produce self colored flowers.

NOTYLIA INCURVA. Orchideæ. Messrs. Loddiges' received it from Trinidad. The flowers are of a pale straw color, having fine yellow spots near the base of each petal. (Bot. Reg.

REFERENCE TO PLATE.

VERBENA TEUCRIOIDES—Specimens of this very distinct species was first sent to this country by Dr. Gillies who collected them from the highest of the Uspallata mountains in South America, at an elevation of ten thousand feet above the level of the sea. Subsequently Mr. Tweedie sent it from Monte Video, and Sugar Loaf Mountain, Buenos Ayres. Mr. Tweedie also sent seeds of it to the Earl of Arran, in whose garden the plant was first raised, and bloomed during the last summer. The plant grows to the height of two feet or more, erect, having numerous spreading branches. The principal stem terminates with a spike of dense flowers, near a foot long. The flowers are at first of a delicate yellowish-white, which afterwards become a pretty rosy pink colour. The flowers too have a delightful jasmine like scent, which is very powerful in the evening and during night, but like the night scented stock, diminishes as the day approaches. The flowers have not the splendour in colour of several other kinds of Verbenas, but far exceeds all others in scent. The plant is of easy culture, propagating freely by cuttings, and delighting in a compost of loam, and sandy peat, having a portion of well-rotted dung. Messrs. Handyside, of Musselburgh Nursery possess the stock, and will have plants for sale in April, 1839.

It will doubtless flourish freely in the open ground during summer, but to enjoy its fragrance, should be grown near to a sitting room, or be kept in a conservatory or greenhouse. The very large size of the flowers and spike produced, suggest the propriety of impregnating them with some of the richer coloured kinds, in order to produce some splendid varieties from it. Few plants are of more easy culture than new kinds of Verbenas, or more interesting for the flower garden, whether grown as a single plant, or in masses, in the border, or on rock work. It is stated, that in the sailing country of the Verbenas melindris, nearly every cottage is ornamented with it, and we think that, with the other recently introduced species and varieties, ought to have a place in every flower bed in the kingdom.



Adiantum album



Adiantum album



Adiantum patens

MALVA CRENSANA.— This very pretty species we saw most profusely in bloom during the last summer in the Epsom nursery. Mr. Young had a plant of it growing in the open border about five feet high, numerous branched and clothed with its pretty bright flowers, producing a very showy appearance. It ought to be grown in every greenhouse, and in every flower garden during summer.

It is of easy culture, delights in a rich loamy soil, and striking freely by cuttings. The plant we saw had been in bloom several successive months. Mr. Young had another plant growing near to that we have figured, which had been sent for *Malva Crenata*, but the flowers are of a much paler colour, and are not produced in such profusion.

SALVIA PATENS.— Seeds of this fine species were sent to this country from Mexico by Mr. Tweedie. Mr. Lowe, of the Clapton Nursery has been successful in raising a plant, which we saw in bloom in the open border during the last summer. The plant was near two feet high, and appeared to have had a spike of flowers at least one foot long. The spike appeared to have more than five or six flowers expanded at once, but even before expanding they produced a fine effect.

The spike of flowers being too large to introduce into any plate complete, induced us to select an expanded blossom of the largest size, so that our readers would be able to judge of the splendour of the species in its natural size. It has not the objection attached to it of a mass of foliage and few flowers, but the reverse of that is the case. It produces a fine display when grown in a mass together, contrasted with the scarlet or crimson-flowered species. It ought to be grown in every garden, greenhouse, or conservatory. The plant appeared to be of robust habit, and no doubt will be as easily propagated as *S. africana*, *splendens*, &c. We are informed that plants will soon be offered for sale by Mr. Lowe.

FLORICULTURAL CALENDAR FOR JANUARY.

For work to be done in the flower-garden, &c. this month, we refer to our last number, where necessary directions will be found, to which we have little to add in this place. Beds of bulbs if not before covered should now be done, and to which attention was called last month, should immediately be minutely looked over, and encouraged in every possible way, first by guarding those that require it from severe weather, and in the second place by taking means to destroy all kinds of insects, &c. likely to attack them. Mice are not infrequently great pests among bulbs and various kinds of roots; especially in winter, when provisions grow scarce, they resort in great numbers to seeds newly sown, or bulbs newly planted. There are many means to decoy them, most of which if persevered in will succeed. Dahlias and other roots stored in sand or other material for preservation through the winter, are exposed to injuries arising from damp, &c., it is therefore necessary that they be looked over now and then, and timely means adopted to check its increase, and damp from the room expelled. Young plants of *Clintonia pulchella*, &c. will stand quite safe in the greenhouse near the glass, if the situation be light and airy. The soil best for this handsome though delicate plant should comprise two parts of leaf mould, to which may be added a little well decomposed manure, and one part good sandy loam; the soil in mixing should be broken down very fine, and the plants put into sixty sized pots, until they have made some advance, when larger will be necessary. Roses in the forcing-house should be constantly attended to; indeed all shrubs, whether *Jasmines*, *Persian-Lilac*, *Agaveas*, &c., or whatever species of plant intended to flower early by means of artificial heat, should be attended to, liberally watered, and, when necessary fumigated with tobacco, for they are very often seriously annoyed by green-fly, &c., which infest the young shoots to an alarming extent, but perhaps more particularly roses and pinks. Continue to introduce bulbs, &c., and a succession of flowers will be secured for the greenhouse. Attend

to *Amaryllises*, and all kinds of stove roots that are started and starting,—pot and water them, if necessary place them in an increased heat, and be sure to let them have plenty of light. All valuable shrubs and plants which may be deemed hardy, but the hardiness of which has not been sufficiently tested, should be afforded some kind of protection, that the fearful ravages committed by the frost in the preceding winter may not be repeated during the present season. There are various modes of affording shelter to plants, all of which are useful, but most of them are especially applicable to different kinds. Thus, litter for herbaceous plants, old bark for bulbs, and mats or straw hurdles for shrubs and trees, are respectively found most suitable for those peculiar sorts.

In making use of any kind of protection for plants in the open ground, the first and principal point is to attend to the preservation of the roots; for if this is duly affected, most plants will recover and sprout again, even though the stems and branches should be entirely destroyed. This practice is very frequently neglected by cultivators, who appear to think only of preserving the stems and branches, which is certainly sufficient where this end can be fully accomplished, but where the protection afforded to those parts proves inefficient, in nine cases out of ten the roots perish with them. Hence the importance of sheltering the roots likewise.

Whatever material is used for this purpose, the necessity of its being of a dry nature, and also, if possible, capable of repelling wet, should always be kept in view. Moisture, where it exists in any quantity, is sure to attract the greatest degree of frost, and therefore when the roots of plants are surrounded and saturated with a superabundance of it, they will be much more exposed to injury on that account. That covering, then, which is found to be most impervious to rain, will undoubtedly prove most beneficial. By thus protecting the roots, we by no means wish to supersede the use of other covering for the more exposed parts of plants, but merely to see these two desirable objects distinctly yet conjointly effected; and every practicable method should by all means be adopted for preserving the upper portions of shrubs.

All in door plants should now be kept as near the glass as is consistent with their safety; for, even in this, there is a degree of propriety to be observed, which, if exceeded, would greatly endanger the subjects of it. It should not be forgotten, that frost enters chiefly through a glazed roof, and the plants should be placed at just such a distance from it as will secure them from that destructive principle; though it is better to keep them at a trifling distance, and protect them by covering the house with mats in very severe weather.

Cold pits and frames will now be found among the most useful of plant structures. Auriculas, Carnations, and Polyantheses, with all tender plants that have been removed from the flower garden, or are in preparation for that department for the ensuing season, are by this time secured in these or similar erections. They should be carefully tended for the purpose of admitting air in favourable weather, and duly protected with mats, hay, or dry litter, during frosts.

The beds and borders of the flower garden and pleasure grounds may still be dug roughly over, if this operation have not previously been completed. Shrubs of all kinds may be pruned if necessary, and especially climbing plants which must also be nailed to the wall, or fastened against the trellis to which they grow. Make, and plant, cuttings of any species of *Rosa*, or other similar plants, those shoots which are slipped off succeed best, and a light loamy soil is most suitable. All the buds except those at the base and the two uppermost ones, should be extracted, as they would only weaken the plant if left, and in inserting them in the ground, care should be taken to place the earth close around them. Remove any trees or shrubs which require shifting, or that may be desired in any other part of the garden. Always take them up with as much earth as possible about the roots, and careful to preserve the fibrous roots entire.

THE FLORICULTURAL CABINET,

FEBRUARY, 1st, 1839.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

BRIEF HINTS ON THE CULTURE OF THE *RANUNCULUS ASIATICUS*, WITH A LIST OF SORTS DEEMED WORTHY THE ATTENTION OF AMATEURS,

BY CROWFOOT.

EVERY grower of this attractive little flower, should be, in order to be successful, particular in the choice of his soil. To describe a soil minutely and sufficiently, so that any reader may distinguish it to be the right soil, is no ordinary task. It has been advised, and not unwisely to select a soil in which the *Ranunculus ficaria* and other British varieties grow luxuriantly. It should be a loam, rather heavy and tenacious, fine in the texture, soft to the touch, and of a reddish colour.

Procure sometime in the summer months a sufficient to fill your beds a foot deep, and lay in ridges with the turf; to which add about one-third of old horse and cow manure, and turn it till all is decomposed. Make your beds in autumn; so as to allow them several months to settle, before planting season, and at that time only stir the surface two inches deep. Let the top two inches of your compost be free from dung, so that none comes in contact with the tubers.

Plant between the 20th of February and the 5th of March, ac-

cording as the forwardness of the season indicates. Plant one inch and a half deep, and four or five inches asunder. After the plants are up, keep out the drought, by pressing the earth firm and close to the roots, and add a little rich fresh soil. In very dry weather, water, but not over the foliage of the plants; a little manure water will not harm them, but it requires caution in the application of it. Get as good a bloom as you can, but do not suffer more than two flower buds to remain on one root, for by leaving all, there may be weakness and a deficiency the season following. A change of soil is very beneficial.

The Ranunculus root, while vegetating, has several enemies; the wire worm and the cheese-log, are among the most inveterate and mischievous. These insects should be diligently looked after and destroyed in any way, and by any means the florist can command. Half a gallon of small potatoes, each one cut in two, and a stick two or three inches in length thrust into each piece, and buried between the rows about the same depth as the roots are planted, will form a hundred cheap snares, by which thousands of these depredators may be attracted. These should be looked over twice a week, and the insects destroyed; the sticks, part of which are above ground, being a guide to the places where the traps are buried. Occasionally a fresh surface should be cut to the potatoe. This will be found one efficient means of reducing these foes to the Florist.

List of 140 fine varieties in Classes.

*Class I. White ground with
rose, purple, or crimson edging.*

Burns, Waterstone's
Bernard, Tyso's
Charlotte, Bartlett's
Cossack
Esther, Waterstone's
Flavimorus
Lady Peel, Groom's
Lousette
Regina, Tyso's
Tendress

*Class II. White grounds, with
red, rose, or purple mottle.*

Angouleme
Beauty, Milward's
Cowper, Waterstone's
Dona Maria, Groom's
Endon
Gulnare
Helena, Tyso's
Lady Jane Grey, Lightbody's
Lacinda, Tyso's
Orsippus, Tyso's
Queen, Thompson's
Stella

Class III. *White ground with red, rose, or purple spots.*

Addison, Waterstone's
 Benjamin
 Cremona
 Constantia, Tyso's
 Faustina
 Gainsborough
 Innocent, Tyso's
 Lupus
 Lord Cochrane, Waterstone's
 Premium, Tyso's
 Shakspeare, Waterstone's
 Sir A. Cochrane, Lightbody's

Class IV. *Yellow ground with red, or Coffee coloured edging.*

Andromachè
 Bulwark, Lightbody's
 Duke of Wellington, Groom's
 Galatzin
 Grande Monarque
 Horatio
 Herbert, Tyso's
 Julius
 Lorenzo, Tyso's
 Nestor
 Regalia, Tyso's
 Warren, Waterstone's

Class V. *Yellow ground with red or coffee coloured mottle.*

Admiral des Fleurs
 Agamenon
 Bengal
 Competitor, Tyso's
 Duke of Clarence
 Earl of Coventry
 Quintilla, Tyso's

Class VI. *Yellow ground with red or coffee coloured spots.*

Abrissau
 Epius, Waterstone's

Fabius
 Flaminius, Tyso's
 Poitiers, Lightbody's
 Pertinax Tyso's
 Saladin, Tyso's

Class VII. *White grounds with red, or pink stripes.*

Beauté des dames
 Bonté Heldin
 Circe
 Carmus
 Flagellé a quatre Couleurs
 L'Aube du Jour
 Le Téméraire
 Oilette parfait
 Rhododendron.

Class VIII. *Red grounds with yellow stripes*

Beauté Bekemoth
 Favourite Mignonne
 General Hoche
 Melange des Beautés
 Monument Chinois

SELS.**Class IX. *Dark and dark red.***

Achilles
 Auriga, Tyso's
 Coronax
 Charbonnier
 Dolphin
 Emancipation, Tyso's
 Hercules, Groom's
 Llewellyn
 Naxara
 Œil Noir
 Passe Nigritia
 Philocles
 Surpass Tout

Class X. *Purple.*

Admiral Keppel
 Condorset
 Fete Nocturne
 Herostratus
 Lesbos
 Mon Songe
 Sorbonne

Class XI. *Crimson.*

Apollo
 Batscha
 Belle Cramoisi
 Cramoisi Van Ass
 Henrietta
 Kennetua
 Melpomene
 Overwinnaar
 Silvester, Tyso's
 Semiramis

Class XII. *Red.*

Alcides
 Bourgogne
 Cassandra
 Jupiter
 Moliere
 Sarpedon
 Tasso

Class XIII. *Rose.*

Diomede
 Holloway, Waterstone's
 Isabella, Tyso's

Lavinia, Tyso's
 Rosetta, new
 Rose de Provence
 Rose Velona
 St. Jerome

Class XIV. *Yellow*

Beroth
 Don Pedro, Groom's
 Eliza
 Flavus, Tyso's
 Fiesco
 Prefect, Tyso's
 Roi des Ranoncules

Class XV. *Orange.*

Brabançon
 Capucin superbe
 Cedo nulli
 Prince Ferdinand

Class XVI. *Olive.*

Admiral Howe
 Bon Financier
 Carlos
 Jaune ou Pompadore
 Olive, rare

Class XVII. *White.*

Argus
 Blanche
 Clarissa, Tyso's
 Hercules
 Kermes
 White Swan

The above list has been prepared with a view to embrace some of the best flowers in seventeen of the classes, which will enable Amateurs to make a selection from all, or from those classes of which their assortments may be deficient. The undersigned, though one of their race, may, perhaps be permitted to speak well of 140 of his fraternity. He can recommend them as deserving a place in every collection of our much

admired tribe. Though many of our recently produced species are priced at from five to fifteen shillings each, yet about a hundred of us, of longer standing in the world, may be obtained of large cultivators for five pounds.

There are a few sorts belonging to other classes, which if acceptable to your readers may be brought into notice with a few remarks at a future opportunity, by your humble servant,

CROWFOOT.

ARTICLE II.

ON STRIKING PLANTS FROM CUTTINGS, &c.

BY EDINENSIS.

I HAVE felt at various times inclined to communicate to you, for insertion in your useful, because practical publication, the results of experiments, some with which have been attended with doubtful, and others of decided success; but has hitherto been deterred, by a reluctance to put you to the expence of postage, for which probably the value of my observations might not compensate. Having purchased all, except Vol. IV. of the Cabinet, (which I have again and again ordered, but without success); I have looked over all your editorial notices on the fly-leaf and elsewhere, but could never, amidst all your requests for communications, find so much as a single hint, how correspondents should act on the very important, I should rather say, the delicate point, the post paying of their letters. I find, however, that most of your correspondents prefer being anonymous, or to flourish under the name of some fashionable or favourite plant, or flower, and of course, under such guise or disguise (not knowing who your correspondents may be) you are not bound to retain their lucubrations, nor consequently be subjected to postage from them, unless you please. Relieved therefore by this view of the matter, I feel less annoyed at the thought of a shilling and three-halfpence, which, in the first instance, must be paid for these remarks.*

I have ever read with the utmost avidity all that relates to

* Any communication sent by letter signed anonymous or otherwise if of an useful character, we shall be glad to receive.—CONDUCTOR.

the propagation and culture of plants. As to the first, much has been written of attempts to strike cuttings in water, but from my own experience in such attempts, I am satisfied that that method will not supersede the use of sand and the bell-glass. The plan of Mr. John Street, gardener at Biel, East Lothian, given at page 234 Vol. III. of the Cabinet, of striking cuttings in moss, is far more deserving of attention; I have tried it various ways, and think I have in some respects, improved upon his method (the results of which I may communicate hereafter) and always with success. At present I incline to the belief that there are few or no plants capable of propagation by cuttings, that may not be struck in this way more certainly and more successfully, than by any other means, as now practised by water, sand or soil. Let any of your practical readers try the experiment with pure moss, (hypnum) in the ensuing spring, and I feel confident they will come to be of the same opinion; but the mode I have to communicate is still more novel.

Having purchased a plant of *Phlox cordata grandiflora*, so highly spoken of in the Gardener's Gazette, another publication to which I subscribe, I watched its progress towards flowering with much interest, but with Lallah Rookh, I may exclaim,

"I never loved a tree or flower, but 'twas the first to fade away."

My *Phlox*, did not certainly fade in the sense of the poet. Its destruction was the work of a day, or rather of a moment. It was on the 6th of September last, the day of the memorable storm, among whose dreadful devastations, the wreck of the Forfarshire stands recorded as not the least appalling. I hurried home at an earlier hour than usual from the Gude-town, as much to save my own head from the winged missiles of slates and chimney pots that were every where descending, as to save the heads of my Dahlias in my garden in the suburbs, when amidst their wreck, I had the additional mortification of beholding the only two stalks upon my *Phlox* snap through and through, not a shred of bark left undissevered whereby to splice them up again. Well thought I, here I must wait another twelve months to see the *Phlox cordata grandiflora*, shew the splendid blossoms so be-praised by the Gardener's Gazette. But may the root not perish? was the question! Can I do nothing with these broken stems? was the

next! I took one of them, the most flexible of the two, though both of them had made a great deal of wood (so to speak) and twisting it round and round inside a 40-sized pot, a process not accomplished without two or three fractures, till I had left only about six inches of the stem (the top having been cut off,) and that portion having filled the pot with the usual modicum of drainage and light soil, I brought above the surface, pegging it at the curvature to the soil; at the present moment I have not a more thriving plant in my greenhouse, shoots of two or three inches having already pushed from the upright portion of the stem.

I had some high priced Dahlias which I was afraid I might loose root and branch by the storm and the bad weather, of which I anticipated it (ominously as the season has shewn) to be the harbinger. Of these, some ten days or a fortnight later, I took off shoots, which I twisted, not without many fractures, and rooted in the same way, but some of them were so far gone, that I had no ground to hope of success, yet to my surprise, some of these have succeeded and sent up new shoots through the soil, and though the elevated tops have partially faded, the shoots through the soil look as fresh and vigorous as ever, although it is in the depth of December.

I have thrown these remarks together in great haste, and if you approve of them, you may hear again from

EDINENSIS.

ARTICLE III.

ON THE CULTURE OF FLORISTS' FLOWERS.

BY FLORA.

BEING an old subscriber to your useful publication, and wishing to see it prosper, I have sent you this for insertion if you think fit, and should it be accepted, I may continue at times to forward you others of the same nature, and particularly on Florists' Flowers, which is, or ought to be, the leading article in your Magazine.

My garden is in a low damp situation, rather shaded by trees, and to keep up any tolerable show of bloom in the season is not accomplished without some attention and skill, and as the detail

of my practice may assist others in like situations, it may, perhaps, be in some degree useful to a portion of your readers.

I shall begin with the culture of the Auricula, as it is justly acknowledged the queen of spring flowers by all who have seen an Auricula stage in full bloom, and as the management of the plants in a proper way, is necessary to produce the desired effect, I shall endeavour to give you my practice, and hope it will induce others to try the culture of this beautiful flower, as I am persuaded many are deterred by the difficulty of keeping their plants for any length of time in a sound healthy state, and of course feel disappointment in the blooming season. There are three things that are necessary to be attended to, namely, soil, shelter, and situation.

A good deal has been said about soils proper for the cultivation of the Auricula, and almost every grower has his peculiar one which of course he recommends as the best. I have also a compost which is most simple, and answers the purpose as well perhaps as the most elaborate composition. In some waste place I throw together the weeds, tops of vegetable leaves, &c. and cover these with turf or garden soil, and a little sand or road scrapings, with occasionally a barrowful of horse dung, making the compound as near as may be one half vegetable matter, one-fourth loam, and one-fourth sand, this I form into a ridge, and turn it frequently till reduced to a fine soil, and by adding to one end and taking from the other, I am supplied constantly as wanted. In the general potting season, July or August, I take a portion into a barrow, for the purpose of examining it minutely to clear it from stones, worms, or any other injurious substance, working it well over with the spade, then let it remain till nearly dry before potting with it.

The next requisite after soil, is shelter, this is variously applied, some keep their Auriculas in a cucumber frame during winter, but this is too damp and close, and the sashes lying too flat, the water is apt to drop through, and spoil the plants; I do not see why Auriculas should not have a house as well as Geraniums, and such a house upon a small scale I have, and it answers the purpose remarkably well, I will endeavour to describe it in as clear and brief a manner as possible; it is made of three-fourth inch deal boards on each end closely jointed, the height behind is five feet, and in front one foot, and this is made to have a good slope, the breadth four feet and a half, front to back the

bottom. The front is covered with two sashes, each six feet by three feet, making the whole breadth of the front, about six feet three inches; as the sashes do not slide, but move on hinges fastened to a piece of wood, which goes up the middle, and each sash will thus lift up on one side, and fold backward over the other, and thus, by folding them up in succession each alternate fair day, you may expose the plants to sun and air as required.

The back part is as I said before five feet high, and six feet three inches in breadth, it is closed in by two doors hung by loops and crooks, which are taken off during summer, and this gives the plants plenty of air: it has six shelves that move nearer or farther from the glass, their ends rest on laths nailed within the sides, you may have two or three shelves on each pair of laths if you choose, the lowest is about three inches from the ground, and about eight inches from shelf to shelf, the whole cost about three pounds; this house or frame, if you choose to call it so, will hold a hundred plants on the shelves, and by laying the inside ground floor within the square of bricks on which it stands with ashes, you may have a place for Polyanthuses or common Auriculas during winter. A shelter of some sort is necessary in wet weather, for though the Auricula is a hardy plant, and will bear any degree of cold, except when budding for flower, but wet is at all times an enemy, if it gets into the heart and remains too long.

The third is situation, which is as important as soil or shelter, this must be dry in winter, airy, and elevated above the damp which usually in October and November, causes some plants to go off in what is termed the neck rot, and this is entirely the effect of wet and injudicious management.

On wet ground the plants must be elevated above the surface, and have all the sun you can expose them to, and during spring, until the bloom requires shading. In my next I shall give my routine of management for twelve months, and afterwards, some remarks on the sorts of Auriculas, &c.

FLORA.

ARTICLE IV.

ON FORCING THE LILY OF THE VALLEY AS PRACTISED IN
GERMANY AND THE LOW COUNTRIES.

BY G. G.

THIS sweet little flower, which seems to be so little noticed in Britain, is quite a favourite flower in this country, so much so that the natives do not think their garden complete, without a quantity of it growing in shady borders, and in winter when forced, is highly valued. As some of the readers of the Cabinet may have an opportunity of forcing this sweet flower, I forward you the following particulars as practised here, should you consider it worth insertion.

To have flowers at Christmas, the latter end of November is the time to take up the roots. Those selected must not be less than two years old, and in appearance, are something similar to small heads of asparagus, when about two or three inches high, and are furnished with fibrous roots; each of these tubers are wrapped round with a little moss, and placed in pots or mignonette boxes, close together. The boxes or pots are previously filled with old bark or light earth, a thin portion is laid over the crowns, and then a layer of moss which keeps the roots moist, assists in drawing up the flower stems. The boxes or pots are then placed on a fire flue, or any other warm situation. Over these are turned boxes or pots of the same dimensions, upside down, to keep the plants quite dark; in three or four weeks, according to the warmth of the situation, they are abundantly furnished with their lovely bell-shaped flowers, six or eight inches high. Those coming into flower first, are taken out of this situation, being easily removed by having moss round the roots, and placed in small wicker baskets, or ornamental vase, with Hyacinths, Van Thol tulips, &c. which are forced, something similar, for this purpose. When this sort of winter flower basket, pyramid, orange, or vase, is properly executed, the colours of the flowers regularly mixed, and the spaces betwixt the plants filled up with ornamental moss, it certainly has a very neat and pleasing appearance.

The market gardeners are busily employed during the months of November and December, in preparing such decorations for the side board or drawing room table, as there are only a few

dwellings but have a specimen of this sort, to welcome the happy morn of Christmas.

The tubers of this plant, when purchased for forcing, cost from three to four shillings per hundred. Where a succession is required, the roots are kept in a shady place, or in the border in the garden, covered a foot or eighteen inches with fresh stable litter, so as to be easily come at in frosty weather, as occasion may require. When finished flowering, they are planted in the garden at the latter end of March, and form a plantation for forcing purposes in two or three years.

G. G.

ARTICLE V.

REMARKS ON THE ROSE.

(Continued from page 13.)

THE deep-red China rose was first introduced by Gilbert Slater, Esq. of Knotsgreen, near Laytonstone, in the year 1789; but this is still confined to the greenhouse, being of a much more delicate nature than the common China rose. The flowers are semi-double and large in proportion to the plant, of a fine dark carmine colour, and of delightful fragrance.

The China rose, which has been named Lady Bank's rose, we hope to see soon hardy enough to leave the green house, where it has occupied a place since the year 1807. This is a double-white rose, of very diminutive size, but producing such abundance of blossoms, as to render the branches extremely elegant. We are informed that it was discovered growing out of an old wall in China.

In pleasure-grounds it is scarcely possible to plant too many rose-trees, and they have the best effect when three or four plants of the same kind come together. The Scotch or burnet-leaved rose, from its dwarf growth, forms a good foreground to other roses; and the neat little Rose de Meaux should advance towards the walks, whilst the more towering kinds may mix with shrubs of the middle class.

Where the lawn is interspersed with little clumps, fenced with basket-work, each clump or basket should be confined to one

species of rose, or kinds that are quite opposite in colour; and as it is particularly desirable to keep these clumps successively in blossom during the season, those clumps that blossom the earliest and the latest should be divided by others that flower in the intermediate space.

Rosaries are formed into various devices; but the most common method is by planting the tallest standard rose-trees in the centre of a clump, around which the different species and varieties are placed according to their height of growth, the edge finishing by the dwarf kinds.

Rock work is sometimes covered with creeping roses, and surrounded with other varieties.

For covering arbors or trellis-work, the bracted rose, *Rosa bracteata*, commonly called Sir George Staunton's rose, which was brought from China in the year 1795, is the most proper, for it grows to a great height, and thick of branches that are covered with shining leaves of a very fine green. The flowers are single and perfectly white, of a strong and agreeable perfume; it blossoms in August and September.

The modes of retarding the flowering of the Provence and moss roses, until the autumn are various; and as it is desirable to continue those beauties of the garden longer than they are naturally disposed to last, we will mention the best means of obtaining the enjoyment. The most simple method is by cutting off all the tops of the shoots that have been produced the same spring, which should be done just before they begin to show their buds; this will cause them to make fresh shoots, that will produce flowers late in the autumn. It may also be done by transplanting the bushes in the spring, just as they have formed their buds, which should be cut off, but the roots must not be out of the earth long enough to become dry, and they generally require watering when transplanted late, to obtain roses in October and November.

On the continent, where much more pains are bestowed on the retarding of flowers than in this country, the rose-trees are dug up just as they begin to shew a leaf bud, and the roots are instantly placed in a kind of mortar, formed of brick earth, which serves as a preservative plaster, whilst it debars the fibres of the roots from obtaining the necessary nutriment that would cause the usual growth of the plant. From this state of rest, the plants are removed into the clumps or flower borders in May or June,

according to the time they are wished to be in blossom. When the season is dry, they will require frequent watering to ensure fine flowers. These plants should be kept in a cellar or a shed, where there is but little light.

The common Provence and moss-roses are the most esteemed for forcing, on account of their perfume.

“ This soft family, to cares unknown,
Were born for pleasure and delight alone.
Gay without toil, and lovely without art,
They spring to cheer the sense, and glad the heart.”

MRS. BARBAULD.

This sweet emblem of love, like the human body, breeds a canker in its bosom, that often destroys its heart.

“ She never told her love,
But let concealment, like a worm i'the bud,
Prey on her damask cheek.” SHAKESPEARE.

“ Death's subtle seed within,
(Sly, treacherous miner!) working in the dark,
The worm to riot on that rose so red,
Unfaded, ere it fell; one moment a prey!

YOUNG.

(To be continued.)

ARTICLE VI.

ON CHINESE GARDENS.

(Continued from page 14)

THEIR summer scenes compose the richest and most studied parts of their gardens. They abound with lakes, rivers, and water-works of every contrivance; and with vessels of every construction, calculated for the uses of sailing, rowing, fishing, fowling, and fighting. The woods consist of beech, oak, Indian chesnut, elm, ash, plane, u-ton-shu (a beautiful specimen of the sycamore, peculiar to China) common sycamore, maple, abele, and several other species of the poplar; with many other trees, peculiar to China. The thickets are composed of every fair deciduous plant that grows in that climate, and every flower or shrub that flourishes during the summer months; all uniting to

form the finest verdure, the most brilliant, harmonious colouring imaginable. The buildings are spacious, splendid and numerous, every scene being marked by one or more; some of them contrived for banquets, balls, learned disputations, rope-dancing, and feats of activity; others again for bathing, swimming, reading, sleeping, or meditation.

In the centre of these summer plantations, there is a large tract of ground set aside for more secret and voluptuous pleasures, which is laid out in a great number of close walks, colonades and passages, turned with many intricate windings, so as to confuse and lead the passenger astray; being sometimes divided with thickets, of underwood, intermixed with straggling large trees; and other times by higher plantations, or by clumps of the tse-tan, (a very large species of the rose tree, the wood of which is uncommonly beautiful, and used by the Chinese workmen for tables, cabinets, &c.) common rose-trees, and other lofty shrubs. The whole is a wilderness of sweets, adorned with all kinds of gaudy productions. Gold and silver pheasants, pea-fowls, partridges, bantam and golden hens, quails, and game of every kind, swarm in the woods; doves, nightingales, and a thousand melodious birds, perch upon the branches, deer, antelopes, musk goats, spotted buffaloes, shen-si sheep, (a sort of sheep with very long tails, which trail upon the ground), and Tartarean horses frisk upon the plains. Every walk leads to some delightful object; to groves of orange and myrtle, to rivulets, whose banks are clad with roses, woodbine and jessamine; to murmuring fountains, with statues of sleeping nymphs, and water gods; to cabinets of verdure, with beds of aromatic herbs and flowers; to grottos cut in rocks, adorned with incrustations of coral shells, ores, gems, and chrysalizations, refreshed with rills of sweet scented water, and cooled by fragrant, artificial breezes.

Amongst the thickets which divide the walks, are many secret recesses; in each of which there is an elegant pavilion, consisting of one state apartment, with out houses, and proper conveniences for eunuchs and women servants. These are inhabited, during the summer, by their fairest and most accomplished concubines; each of them, with her attendants, occupying a separate pavilion.

The principal apartments of these buildings, consists of one or more large saloons, two cabinet or dressing rooms, a library, a couple of bed chambers and waiting rooms, a bath, and several

private closets, all of which are magnificently furnished with entertaining books, numerous paintings, musical instruments, implements for gaming, writing, drawing, painting and embroidering; with beds, couches and chairs, of various constructions, for the uses of sitting and lying in different postures.

The saloons generally open to little enclosed courts set round with beautiful flower pots, of different forms made of porcelain, marble, or copper, filled with the rarest flowers of the season; at the end of the court there is generally an aviary; an artificial rock with a fountain and bason for gold fish, or blue fishes of Hay Nang, (a little beautiful blue fish, caught near the island of Hay Nang of which the Chinese ladies are very fond), a cascade, an arbor of bamboo or vine, interwoven with flowering shrubs, or some other elegant contrivance of the same nature.

Besides these separate habitations, in which the ladies are privately visited by their patron, as often as he is disposed to see them, and be particular, there are, in other larger recesses of the thickets, more spacious and splendid buildings, where the women all meet at certain hours of the day, either to eat at the public tables, to drink their tea, to converse, bathe, swim, work, romp, or to play at the mora, and other games known in China, or else to divert the patron with music, singing, lascivious posture-dancing, acting plays or pantomimes, at all which they generally are very expert.

Some of these structures are entirely open, the roofs being supported on columns of rose wood, or cedar, with bases of Korean jasper, and chrystal of Chang-chew-fu; or upon wooden pillars, made in imitation of bamboo, and plantain trees, surrounded with garlands of fruit and flowers, artfully carved, being painted and varnished in proper colours. Others are enclosed, and consist sometimes of many different sized rooms of various forms; as triangles, squares, hexagons, octagons, circles, ovals and irregular whimsical shapes, all of them elegantly finished with incrustations of marble, inlaid precious woods, ivory, silver, gold, and mother of pearl, with profusion of ancient porcelain, mirrors, carving, gilding, painting, and laquering of all colours.

The doors of entrance for these apartments, are circular and polygonal, as well as rectangular; and the windows by which they are lighted, are made in the shapes of fans, birds, animals, fishes, insects, leaves and flowers; being filled with painted glass,

or different coloured gauze, to tinge the light, and give a glow to the objects in the apartment.

All these buildings are furnished at a very great expence, not only with the necessary moveables, but with pictures, sculptures, embroideries, trinkets, and pieces of clock work of great value, being some of them very large, composed of many ingenious movements, enriched with ornaments of gold, intermixed with pearls diamonds, rubies, emeralds, and other gems.

Besides the different structures already mentioned, they have some built in large trees, and disposed amongst the branches like nests of birds, being finished on the inside with many beautiful ornaments, and pictures, composed of feathers, some they have likewise made in the form of Persian tents, others built of roots and pollards, put together with great taste : and others, which are called *Miau Ting*, or *Halls of the Moon*, being of prodigious size and composed each of one single vaulted room, made in the shape of a hemisphere, the concave of which is artfully painted in imitation of a nocturnal sky, and pierced with an infinite number of little windows, made to represent the moon and stars, being filled of tinged glass, that admits the light in the quantities necessary to spread over the whole interior fabric the pleasing gloom of a fine summer's night.

The pavements of these rooms are sometimes laid out in parterres of flowers ; amongst which are placed many rural seats made of fine formed branches, varnished red to represent coral ; but oftenest their bottom is full of clear running water, which falls in rills from the sides of a rock in the centre ; many little islands float upon its surface, and move around as the current directs, some of them covered with tables for the banquet, others with seats, and other furniture, for various uses.

To these *Halls of the Moon* the Chinese princes retire with their favourite women, whenever the heat and intense light of the summer's day becomes disagreeable to them ; and here they feast, and give a loose to every sort of voluptuous pleasure.

No nation ever equalled the Chinese in the splendour and number of their garden structures. We are told, by father *Attiret*, that in one of the imperial gardens, near *Pekin*, called *Yven Ming Yven*, there are besides the palace, which is of itself a city, four hundred pavilions, all so different in their architecture, that each seems the production of a different country.

(To be continued.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

BRASSAVOLA MARTINIANA. Dr. Von Martin's Brassavola. (Bot. Reg.

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

1. This species was originally discovered by Dr. Von Martins on the banks of the Rio Negro in Brazil, and where it was found to delight in a rough and stony soil, not too retentive of moisture. Messrs. Loddiges's cultivated the plant most vigorously in a soil, consisting of rough peat, well mixed with broken bricks or stones, and the pots must be well trained at the bottom. Each flower is about two inches and a half across. Petals yellowish green; labellum white, having the base yellow.

LEONOTIS NEPETA-FOLIA. Cat Mint-leaved. (Bot. mag. 3700

LABIATÆ. DIDYNAMIA ANGIOSPERMIA. synonym. PHLOMIS NEPETEFOLIA.

2. Introduced from various parts of Africa. The flowers are in dense axillary, distant clusters. Each cluster is upwards of two inches in diameter. The flowers are of a bright red colour, clothed densely with red velvety hairs. The plant, when in bloom, makes an interesting and showy object. Leonotis, from Leon a lion, and Os Opis an ear, from a fancied resemblance of the flowers to the ears of that animal.

LEYCESTERIA FORMOSA. Beautiful. (Bot. Reg. No. 2 1839

CAPRIFOLIACEÆ. PENTANDRIA MONOGYNIA.

3. This plant is a native of the Himlaya mountains, and is a charming shrub, and grows very profusely on some of the highest mountains, at an elevation of 8000 feet above the plains, surrounding the valley of Nepal, where it blooms from April to October. Seeds of it were sent from India by Dr. Royle to the London Horticultural Society, it is found to be a hardy evergreen, having stood the severity of the winters 1837 and 1838. In its native situation it grows says Dr. Wallich, so that its stem rises to twelve feet high, and upwards of an inch in diameter. The leaves are large and of a dull green. The flowers are produced in drooping spikes. The bractæas are showy, being of a reddish purple colour. The corolla is white, and about three quarters of an inch long.

The plant is found to grow the most freely in an open sunny situation. Although it is not so handsome as was anticipated from the account sent of it from India, yet it will be found very ornamental when the plant has acquired a large size. Plants may now be obtained at a few shillings each at most of the public nurserymen. Leycesteria, so named in compliment to William Leycester, chief judge of the principal native court under the Bengal presidency; a very distinguished horticulturist.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON FIRST RATE PROPERTIES OF CALCEOLARIAS.—As I intend to raise new varieties of the Calceolaria, I would be much obliged to any of your Correspondents to state in the Cabinet, the points which are principally attended to by the judges on deciding on the merits of the Calceolarias produced at the different shows in the South, and how much they reckon, on the form, the colours, and the size of the flowers, respectively. SCOTUS.

ON THE CHRYSANTHEMUM.—I have in my conservatory a white Chrysanthemum, quilled, and very double; upon one branch there is a flower different from the rest, having two or three rows of the outside petals quite pink. I have also another plant of large pink clusters, having upon its branches flowers nearly perfectly white. I was at first inclined to think that this might be owing to the age of the flowers; but I find that other flowers of the same age do not assume the same colour. If I were to cut off these branches and strike them in a hot bed, I should be glad to learn whether it is probable they would give out flowers of the same sort, or return to that of the native stem?

(We have found in some instances that a distinction has been retained, and in others where they have returned to the original. It is worth trying!—CONDUCTOR.)

In Mr. Freestone's method of saving the seed of this flower in last year's Vol. p. 229, he says, "Take the pollen from any of the same double flowers and apply it to the stigma of the two outside rows of Petals." Does he mean to the outside rows of a semi-double flower, or to any double flower?

(To any.—CONDUCTOR.)

TILLINGTONIENSIS

ANSWER.

ON RAISING DAHLIAS WITH VARIEGATED FLOWERS.—Answer to C. Nevill's Query on the Dahlia, in the Cabinet of January 1837. I tried the experiment here mentioned, applying the roots to the King of the Whites, and of Lady Fitzharris, the first a pure white, and the other a bright scarlet flower, they were applied together before being planted, and planted in the usual way. There was only a single flower which came to perfection, and which was very large, but had the colour of Lady Fitzharris alone. I attributed the size of the flower to the additional nourishment obtained from the roots, but as Lady Fitzharris is naturally a large flower, I now incline to doubt this. I did not get any seed from the flower, as the frost came on early that season. As my object was the obtaining Dahlias with variegated flowers, I am now satisfied it would be more quickly obtained by impregnating the stigma of one with the pollen of others. I have not repeated the experiment. When the roots of the two Dahlias were taken up at the end of the season, the root of the King of the Whites was perfectly wasted, that of Lady Fitzharris quite fresh. SCOTUS.

REMARKS.

ON ROSA HIBERNICA.—In your last number, you make a quotation from Mr. Gore's Rose Fancier's Manual, which contains one translated from a French author whom you characterize as having published the best account of Roses, who after depreciating Mr. Templeton's discovery of the Rosa Hibernica, there states, that it is the same with Rosa canina and R. spinosiss.

nima, or if the seeds are sown in stiff land, it will produce the former, if in light laud, the latter. I have no specimen of *Rosa Hibernica* at present by me, and therefore cannot compare it with *R. canina*, but as Sir James E. Smith, the first botanist of his day, considers it a distinct species, I cannot permit the article to be uncontradicted; I know the *R. spinosissima* as well as the *R. canina*, and have seen wild specimens of every sort, but never in any degree approaching to each other; indeed, I doubt, if two more distinct species could be selected, and I am sure that the seeds of the one will not produce any plant likely to be mistaken for the other, as I have more confidence in Sir James E. Smith than Mons. Boitard, you may rest assured that as the roses *Hibernica*, *Spinosissima* and *Canina*, are distinct species and not varieties, the seeds of the one, can never by any chance produce plants of either of the other two.

Fifehire, December 1838.

SCOTUS.

THE GARDENS
OF THE
ROYAL BOTANIC SOCIETY OF LONDON,
Inner Circle Regent's Park.

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HER MOST GRACIOUS MAJESTY.

VICE PATRONESSES AND MEMBERS.

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&c. &c. &c.

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The Lord Bishop of Durham	Right Hon. C. P. Thompson, M.P.
The Lord Bishop of Lichfield	
The Lord Bishop of Norwich, Pres. Lin. Soc.	

&c. &c. &c.

We have very great pleasure in noticing the operations of this newly formed Society, of their intentions to form a Botanic Garden in the centre circle of Regent's Park; and to see the object is already patronized and supported by such a numerous list of the Nobility and Gentry, who are, uniformly, promoters of science, arts, &c.

The situation selected, is, in our opinion, the best that could be obtained to answer all its purposes.

During the last two years we have very frequently visited the ground, and particularly examined the situation, soil, trees, plants, &c., in order to ascertain its suitability for horticultural and floricultural purposes; and so satisfied were we of its merits, that more than a year back we entered into correspondence with Mr. Jenkins as to terms of taking it, with a view to attempt at what is now commenced by this Society.

We have read objections made by the conductors of some gardening periodicals, relative to the situation selected being unfavorable, and that the soil was very unsuitable to the growth of plants. It is stated, "that the situation is such, as to be annoyed so with smoke, that no delicate plant will thrive in the open air;" we have seen very numerous facts in the ground to disprove such a statement, even with trees and plants that had had ordinary attention as to planting, and subsequent treatment. And the object of the Society, having received the assistance of government to further their intentions, it is not presuming too much to say that any existing administration of the affairs of this country will be so far desirous to encourage science, &c., as to prevent the erection of anything annoying, nearer than the dwellings there are at present.

Respecting the soil it is said to be a strong clay upon a retentive bottom; admitting such to be a fact, even to an extent, which, up to the present has been injurious, the position of the ground, with that surrounding it, is such, as to afford every desirable facility to remedy it. It appears to us that a desire exists in some parties to produce an unfavorable impression on the mind of the public, which no facts can justify. The free growth of forest trees, shrubs, and other plants are sufficient evidence on the subject. And whatever plants may be hereafter introduced on the ground that require accommodation with a peculiar soil, or mode of treatment tending to promote their vigour, (and such attention is obliged to be paid to some plants in every horticultural and floricultural establishment, whether public

or private) they will unquestionably be received; and in this as well as the other objects the Society have in view, we have every reason to conclude, the garden and its appendages will be so managed, and be so successful, pleasing and instructive, as to meet with the approval, as it no doubt will, with the desired support of the British Public, and we do most heartily wish it every success.—(CONDUCTOR.)

Notwithstanding the manifest importance of a proper acquaintance with the productions of the vegetable kingdom, there is not, to this day, in the metropolis of the commercial world, a public establishment devoted to their general study: and while foreign countries possess such institutions, and there are forty in our own empire, we are the last to avail ourselves of their advantages. The benefits to be derived from a properly directed botanic garden are so apparent that it argues an inconceivable deficiency in our local administration that they should be so long neglected. The only way in which the study of botany has received attention has been for medical purposes; and it is to be regretted that that knowledge should be considered as restricted to one profession, which is capable of still further development. The chemical properties of plants are not confined to their medical uses, but exercise important functions in manufactures; and indeed when it is considered how little advanced is our acquaintance with their analysis, they should acquire a greater importance in our eyes, from their susceptibility of extended application in a more advanced state of science. The use of dye plants is but one of many chemical preparations; and the manufacture of sugar is a series of chemical processes. The employment of vegetable productions in textile fabrics makes them an object of commercial importance, and renders them deserving of scientific investigation; and the manufacturing properties of plants are so various as at once to open a wide field for observation and inculcate the necessity of it.

But if the study of the raw material have met with so little attention at our hands, there is another application of it to manufactures which has necessarily suffered still more in the general neglect. This is the application of the study of the external form of plants to the improvement of our arts and manufactures; and we need not be surprised if the effect of such neglect has been to leave them in a state of barbarism, as compared with the rest of Europe, unworthy of our positions in the commercial world. Few points could be selected more strongly to show the intimate connexion which exists between all departments of the arts and sciences, and the ill effects which proceed from the non cultivation of any of the series. In this case a complicated neglect is involved; and we find an equal want of attention to botany, the fine arts, and our true commercial interests. The consequence is, not only are we deprived of foreign markets, but we are unable to preserve our own from the inroads of strangers, and are subjected to the stigma of barbarism in the eyes of those to whose taste we are made captive by our own ignorance. The extent of this economical injury is twofold; first as we are subjected to a positive loss by the importations of silks, cottons, velvets, papers, and jewellery from France; clocks from Switzerland; bronzes from Italy; and Berlin ware from Prussia; but we continually lose by our exclusion from foreign markets, which other advantages would enable us to supply. The United States would undoubtedly prove a large customer for articles of taste, were we able to supply them with such productions, for which the congeniality of associations between the two nations would obtain a preference over any foreign rivals.

The adaptation of botanical subjects is the principal source of patterns for textile and imitative goods, and a facility for studying such objects is consequently the desideratum for the improvement of our manufactures. This has been recognised by every public body by which it has been investigated; and the evidence before the Select Committee of the House of Commons, on the State of Arts and Manufactures, affords abundant testimony of the necessity of this study.

Sir C. Cockerell, the architect of the bank, says—"As regards porcelain, foreigners are superior to the English in flower painting and ornamental scroll work."

Mr. George Rennie, the sculptor, attributes the excellence of the French artists to their superior facilities for studying design, and particularly recommends instruction in botanical drawing.

Mr. Crabb, an eminent designer says—"The French papers are superior in design, both in the original idea and the detail of the drawing; for in England we have no school to obtain such instruction. The foliage is beautiful and the flower borders are exceedingly well executed, while in the English patterns the leaves are not those of the flower, an inaccuracy which we never find in the French. This facility of adapting the forms and colours most gratifying to the eye, must be the result of early and continued acquaintance with flowers and plants. A botanical garden would be of the highest value, for there is scarcely anything where, in some form, botany is not introduced, and more extensively we are acquainted with it the better; we get more beautiful lines, more original effects, and finer forms than we do by any other means; we find no coloring equal to that of nature."

Mr. Donaldson, the architect, says—"that the manufacturing artists require instruction, in botany, as connected with construction, in order to give a workman an insight into the nature and properties of vegetable substances, and a more accurate knowledge of their forms when he wishes to delineate or model them; all of which may be very much derived from the study of their growth and formation. I should also recommend, that such a general idea of chemistry, as connected with construction, should be given, as would enable a workman very usefully to apply that knowledge in respect to dry rot, and other similar circumstances, such as the various properties of colors, both mineral and vegetable, and their greater or less durability."

(TO BE CONTINUED.)

NEW OR RARE PLANTS.

NOTYLIA PUNCTATA. Orchidææ. The flowers of this species are whiter than those of any other, and are produced on a short fluxuose raceme.

(Bot. Reg.)

NOTYLIA BARKERI. Orchidææ. Received by G. Barker, Esq., from Mexico. The flowers are very like *N. incurva*, but are of a darker yellow, and rather smaller.

(Bot. Reg.)

NOTYLIA MICRANTHA. Orchidææ. Messrs. Loddiges' received it from Demerara. The flowers are very small, of a pale green, with a yellowish lip.

NOTYLIA TENUIS. Orchidææ. Received from Demerara by Messrs. Loddiges'. The flowers are of a pale straw color.

(Bot. Reg.)

PLEUROTHALIS MUSCOIDEA. Orchidææ. This is in the collection of Messrs. Loddiges', and is the smallest plant of any of the Orchidææ sent to this country. The flower is of a dull purple, having an orange margin to the petals and sepals, the lip is stained with purple and orange.

THUNBERGIA HAWTOWNIANA.—This new and pretty flowering species produces a profusion of its purple blossoms which have a pretty appearance, more particularly when grown in contrast with the *T. alata*, and *T. leucantha*.

FLORICULTURAL CALENDAR FOR FEBRUARY.

GREENHOUSE.—This department should have good attendance during this month, similar in its operations to those directed in January, which see.—Oranges, Lemons, and Myrtles, &c., will require water frequently, they usually absorb much. The herbaceous kind of plants will require occasional waterings, but less frequent and in less quantities than the woody kinds. Succulents, as Aloes, Sedums, &c., should be watered very sparingly, and only when the soil is very dry. Air should be admitted at all times when the weather is favorable, or the plants cannot be kept in a healthy state. If any of the Orange, Lemon, or Myrtle trees, &c., have naked or irregular heads, towards the end of the month, if fine mild weather occur, begin to reclaim them to some uniformity, by shortening the branches and head shoots, by this attention they will break out new shoots upon the old wood and form a regular head; be repotted in rich compost in April, reducing the old ball of earth carefully and replacing with new soil. After shifting it would be of great use to the plants, if the convenience of a glass case could be had, in which to make a dung bed, that the pots might be plunged in, this would cause the plants to shoot vigorously, both at the roots and tops. Repot Amaryllis, &c. Tender and small kinds of plants should frequently be examined, as to have surface of soil loosened, decayed leaves taken away, or if a portion of a branch be decaying, cut it off immediately, or the injury may extend to the entire plant and destroy it.

ANNUALS.—Towards the end of the month, sow most of the tender kinds which require the aid of a hot bed in raising, or in pots in heat.

ANOMATHECA CRUENTA, the bulbs of, should now be repotted into small pots, to prepare them for turning out into beds, so as to bloom early.

AURICULAS should now be top dressed, taking off old soil an inch deep, and replacing it with new.

BULBS, as **HYACINTHS**, &c., grown in water glasses, require to be placed in an airy and light situation when coming into bloom. (See Art. Vol. vi, on the subject). The water will require to be changed every three or four days. The flower stem may be supported by splitting a stick at the bottom into four portions, so as it will fit tight round the edge of the glass at the top.

CALCEOLARIAS, seeds of should be sown during the month, and be placed in a hot bed frame, also cuttings or slips be struck as they take root freely now.

CARNATIONS, layers should be transplanted into large pots towards the end of the month, or planted in the open border.

CUTTINGS of **SALVIAS**, **FUCHSIAS**, **HELIOTROPES**, **GERANIUMS**, &c., desired for planting out in borders or beds during spring and summer, should now be struck in moist heat, in order to get the plants tolerably strong by May, the season of planting out.

DAHLIAS.—Seed should be sown either in pots or upon a hot bed. Pots or boxes with seed placed in a warm room, near light and admitting plenty of air to the plants when up will, succeed well. Dahlia roots should now be potted or partly plunged into a little old tan in the stove, or a frame to forward them for planting out in May. As shoots push, take them off when four or five inches long, and strike them in moist heat.

HERBACEOUS PERENNIALS, **BIENNIALS**, &c.—May be divided about the end of the month, and planted out where required.

HYDRANGEAS.—Cuttings of the end of the last years wood, that possess plump buds at their ends, should now be struck in moist heat; plant one cutting in a small pot (60's). When struck root, and the pot is full of roots, repot them into larger; such plants make singularly fine objects during summer.

MIGNIONETTE, to bloom early in boxes, or pots, or to turn out in the open borders, should now be sown.

RANUNCULUSES AND **ANEMONIES** should be planted by the end of the month.

ROSE TREES, **LILACS**, **PINKS**, **HYACINTHS**, **POLYANTHUSES**, **NARCISSUS**, &c. should regularly be brought in for forcing.

TENDER ANNUALS.—Some of the kinds, as Cockscombs, Amaranthuses, &c., for adorning the greenhouse in summer, should be sown by the end of the month; also any tender Annuals desired to bloom early in the open border.

TEN WEEK STOCKS, RUSSIAN AND PRUSSIAN STOCKS, &c., to bloom early should now be sown in pots, placed in a hot bed frame, or be sown upon a slight hot bed.

REFERENCE TO PLATE.

LILUM LANCEFOLIUM ROSEUM. This very beautiful flowering lily was sent by Dr. Siebold, from Japan, and we had the pleasure of seeing it in bloom, and partaking of its fine fragrance during the last summer, at Messrs. Low & Co's Nursery, Clapton, and at Messrs. Loddiges's of Hackney. The flowers of this kind are larger than any of the others introduced by Dr. Siebold, and produces a fine effect. The color is not so striking as the flowers of *L. speciosum*, but in other respects are more magnificent.

The plant we saw in bloom at the Hackney Nursery was growing in a raised bed in the conservatory, and an open sunny situation had been selected, which latter advantage is considered essential to the plant flowering successfully. The flower stem had reached four feet high, and had produced eight of its beautiful blossoms.

We saw some plants grown in pots, but the flowers were much smaller than what we saw at the Hackney Nursery. The finest plants were growing in a rich loamy soil, having a good drainage; when the shoots begin to push the plant requires a free supply of water, which is continued till it has done blooming, and afterwards gradually declined, so as to be kept dry during its dormant state.

We have not seen any plant growing in the open border, but this may arise from their scarcity, as well as present estimated value, but we think it very probable, that if grown in pots in spring, and pushed in a cool frame or greenhouse till the end of May, and then turned out into the open border in a favorable situation, they would bloom superbly; for we observed that the colour of the flower was greatly heightened in proportion to the openness of the situation.

These beautiful lilies ought to be grown in every greenhouse or conservatory. The price now asked is rather high, but their propagation going on so extensively, will soon allow them to be obtained at a lower rate. The mode of propagation we saw very successfully adapted at the Epsom and other Nurseries, was the following. A bulb was taken when in its dormant state, but just when about to vegetate, and the outward scales carefully taken off. The scales are then planted in small pots, one in each, in a light loamy soil, and placed in a frame where there is a gentle heat. These soon form at the base of each a small bulb, and when of the size of a garden pea, they are carefully taken off and replanted in small pots, and by encouragement soon increase to blooming bulbs. The bulb from which the scales are taken is planted for blooming as the others are. When the scales and infant bulbs are in the pots, care is requisite that they are not rotted by an excess of moisture. In some instances, when the scales are not disturbed at an early stage in order to take off a single bulb, three or four bulbs are produced from a single scale.

Attention to propagation will so far increase these delightful plants, that we hope every cultivator of flowers, having the opportunity will possess them.

RUSSELLIA JUNCÆA. This charming plant is one of the prettiest ornaments which can be grown in the greenhouse, and certainly ought to be in every one. It is of easy culture, delighting in a soil of equal parts of rich loam and sandy peat, having a free drainage. The plant is very readily propagated by slips or cuttings inserted in sand, or sandy peat, and placed in a hot bed frame, or other situation where a moist and warm temperature can be obtained.



THE FLORICULTURAL CABINET,

MARCH, 1st, 1839.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

REMARKS ON THE CULTURE OF THE *RANUNCULUS*.

BY MR. THOMAS IBBETT, MOUNT PLEASANT, WOOLWICH.

IN reviewing the Cabinet for May last, I was much pleased with the Article on the culture of Tulips, written by Mr. J. Slater, which does him much credit, and displays sound judgment. I therefore beg to make a few observations, confirmatory of his statement, and may also prove serviceable to such growers as may think proper to put it into practice.

And in so doing it is but fair to state that I received the information from Captain Jones of the royal navy, a gentleman that has spared neither pains nor expence in the culture of the Tulip; he says "that having visited every grower of eminence within twenty miles of London to see their blooms, he could find none to equal the late Mr. Velga's of Hammersmith, a gentleman that was well known for many miles round his neighbourhood," and the method he pursued for the cultivation of the Tulip was as follows:

Having made choice of a good meadow, he took off the surface about six inches deep with the grass sod, which he filled up in the form of a haycock, keeping a sufficient quantity for one year under another, about three months before planting; he began to make up his bed, first taking out from the old bed about two spits

of earth. He then with a spade trimmed off all the top surface of the pile of earth before mentioned until he had as much as would lay over his bed an inch and a half deep, letting it lay eight or nine days exposed to the sun and air, he would then lay on another layer of the same depth as before, and so on until the bed was completed, &c. I have been informed by many persons as well as Capatain J. that Mr. Volga's Tulips surpassed all they had ever seen for the beauty of the foliage and the delicacy of the blooms.

I do not pretend to be a first rate grower of Tulips, but I have no doubt the practice is an excellent one; my attention being chiefly confined to Dahlias, Carnations, Piccotees, and Pinks, the latter of which I flatter myself, few can excel me in, either for a collection or blooming.

Should you think the above remarks worthy a place in the Cabinet, I feel pleasure in forwarding them, and shall feel gratified if they assist any one in the culture of the Tulip.

T. IBBETT.

ARTICLE II.

ON STRIKING *GAILLARDIA PICTA* FROM CUTTINGS, AND FURTHER MANAGEMENT OF.

By Mr. George Geldert, Gardener to Edmund Steer, Esq. Hamm, near Hamburg, Germany.

Not having noticed any thing in the Cabinet on the raising *Gaillardia picta* from cuttings induces me to send you an account of my mode of management with it during the last two seasons, and if it be judged of sufficient interest for insertion in the very useful pages of the Cabinet, I shall be glad of its early insertion, as it may furnish some particulars for practice during the approaching season.

In the spring of 1837 I procured some seed of this very neat and showy flowering plant, but the seed not proving very good, I only succeeded in raising a few plants. After the plants had established themselves in the flower border, and pushed side-shoots about three inches long, I cut them off close under a joint, and inserted six or eight in a small pot. Having a hot bed frame at work, with a little bottom heat, for striking cuttings of *pelargoniums* in, I plunged the pot of *Gaillardia* cuttings therein, and in about three weeks, found every one well rooted.

Having potted them singly into small pots in a rich soil, I placed them in a shady situation, upon a bed of coal ashes, and where they were sheltered from the wind, in this place they soon established themselves.

At the beginning of September, I had a few of the best repotted in rich earth and placed in the greenhouse, which soon came into bloom, and continued to flower for a long time. The remaining plants were plunged in a cold frame where they were protected from the severity of the winter, and early in the following spring I cut off the the tops and side shoots, and struck them along with *Petunias Heliotropes*, &c. About the middle of May of this year, I turned them out into the open ground in order to have an entire bed in the flower garden; they soon began flowering, and continued a mass of bloom till autumn, making a very beautiful appearance.

From these plants I continued to propagate during summer, and now have near four hundred plants to furnish the greenhouse with for the approaching months, and to have a supply to turn out into the open borders and beds the next spring.

I prefer plants from cuttings to those raised from seed, because they begin to bloom very soon after planting out, whereas those from seed generally grow bushy and too much foliage, and seldom begin to bloom before late in summer, generally as far back as August.

G. GELDERT.

ARTICLE III.

REMARKS UPON A NEWLY-IMPORTED HALF-HARDY SPECIES OF SALVIA, CALLED SALVIA PATENS.

BY G. BENTHAM, ESQ.

THE richness and variety of colouring observable in the numerous species of *Salvia*, which adorn the mountains of South America, and Mexico, have long been known to Botanists, but it has happened that few of them have hitherto found their way into our gardens. The *S. splendens fulgens*, *Grahamii*, and *Mexicana* occupy, it is true, the place in our collections they so eminently deserve, and some few others of considerable beauty, such as *S. leucantha*, *leonuroides*, *angustifolia*, &c. are occasionally to be met

quarters of an inch long, hairy, green, and deeply divided into two lips—the upper one entire, the lower deeply two-cleft. The corolla, of a rich blue, between two and three inches long, is remarkable for its broad gaping mouth, the upper lip being long, falcate, and erect, enclosing the stamens and pistil; the lower lip hanging with two lateral oblong reflexed lobes, and the middle one very broad and emarginate.

The *S. patens* will probably thrive best under the same treatment as that which succeeds with *S. fulgens*, and like that plant it will be found to vary much in the size, the brilliancy, and the number of flowers, according to the temperature and light in which it is grown. Particular care should be taken not to weaken the plant, or suffer it to become etiolated, in order that the raceme may not lengthen too much, and increase the distance between the flowers.

We owe this splendid addition to our gardens to the exertions of John Parkinson, Esq. her Majesty's consul at Mexico, who transmitted seeds to this country early last year; and it was raised and first flowered in August last by Mr. W. B. Page, Nurseryman Southampton. It has also been raised by Messrs. Low, Clapton, and Mr. Pontney, nurseryman at Plymouth.

G. BENTHAM.

ARTICLE IV.

ON PROPAGATING TREES BY CUTTINGS IN SUMMER.

BY T. A. KNIGHT, ESQ. F. R. S.

WHEN a cutting of any deciduous tree is planted in autumn, winter, or spring, it contains within it a portion of the true, as it has been called, or vital sap of the tree of which it once formed a part. This fluid relatively to plants, is very closely analogous to the arterial blood in animals: and I shall therefore, to distinguish it from the watery fluid, which rises abundantly through the alburnum, call it the arterial sap of the tree. Cuttings of some species of trees very freely emit roots and leaves, whilst others usually produce a few leaves only and then die; and others scarcely exhibit any signs of life; but no cutting ever possesses the power of regenerating, and adding to itself vitally, a single particle of matter, till it has acquired mature and efficient foliage. A part of the arterial sap, previously in the cutting, assumes an

organic solid form; and the cutting, in consequence, necessarily becomes, to some extent, exhausted.

Summer cuttings possess the advantage of having mature and efficient foliage, but such foliage is easily injured or destroyed, and if it be not carefully and skilfully managed, it dies. These cuttings, such as I have usually seen employed, have some mature and efficient foliage, and other foliage which is young and growing, and, consequently, two distinct processes are going on at the same time within them, which operate in opposition to each other. By the mature leaves, carbon, under the influence of light, is taken up from the surrounding atmosphere, and arterial sap is generated. The young and immature leaves, on the contrary, vitiate the air in which they grow by throwing off Carbon; and they expend, in adding to their own bulk that which ought to be expended in the creation of shoots. This circumstance respecting the different operations of immature and mature leaves, upon the surrounding air, presented itself to the early labourers in pneumatic chemistry. Dr. Priestley noticed the discharge of Oxygen gas, or dephlogisticated air (as it was then called) from mature leaves. Scheele, making, as he supposed, a similar experiment upon the young leaves of germinating beans, found these to vitiate air in which they grew. These results were then supposed to be widely at variance with each other, but subsequent experience has proved both philosophers to have been equally correct.

I possess many seedling young trees of the *Ulmus campestris*, or *Suberosa*, or *Glabra*, for the widely varying characters of my seedling trees, satisfy me, that these three supposed species are varieties only of a single species. One of these seedling plants presented a form of growth which induced me to wish to propagate from it. It shows a strong disposition to aspire to a very great height with a single straight stem, and with only very small lateral branches, and to be therefore, calculated to afford sound timber of great length and bulk, which is peculiarly valuable, and difficult to be obtained, for the keels of large ships; and the original tree is growing with very great rapidity in a poor soil and cold climate.

The stem of this tree, near the ground, presented, in July, many very slender shoots, about three inches long. These were then pulled off and reduced to about an inch in length, with a single mature leaf upon the upper end of each, and the cuttings

were then planted or deeply in the soil. The cuttings were then covered with bell glasses in pots, and put upon the flue of a hot-house, and subjected to a temperature of about 80 degrees. Water was very abundantly given, but the under surfaces of the leaves were not wetted. These were in the slightest degree faded though they were fully exposed to the sun; and roots were emitted in about fifteen days. I subjected a few cuttings taken from the bearing branches of a mulberry tree, to the same mode of management, and with the same result; and think it extremely probable, that the different varieties of *Camellia*, and trees of almost every species, exclusive of the *Fir* tribe, might be propagated with perfect success and facility by the same means.

Evergreen trees, of some species, possess the power of ripening their fruit during winter. The common Ivy and the Loquat are well-known examples of this; and this circumstance, combined with many others, led me to infer that the leaves of such trees possess in a second year the same, or at least, nearly the same power as they possessed in the first. I therefore planted about a month ago, some cuttings of the old double blossomed white and Warrantah *Camellia*, having reduced the wood to little more than half an inch in length, and cut it off obliquely, so as to present a long surface of it; and I reduced it further by paring it very thin and near to its lower extremities. The leaves continue to look perfectly fresh, and the buds in more than one instance have produced shoots of more than an inch in length, and apparently possessing perfect health and much vigour. Water has been very abundantly given; because I conceived that the flow of the arterial sap from the leaf would be so great, comparatively with the quantity of the bark and alburnum of the cuttings, as to preclude the possibility of the rotting of these.

The cuttings above described, present in the organization, a considerable resemblance to seedling trees of different periods of the growth of the latter. The bud very closely resembles the plumule, and the leaf, the cotyledon, extended into a seed leaf; and the organ which has been, and is called a radicle, is certainly a caudex, and not a root. It is capable of being made to extend in some cases, to more than two hundred times its first length, between two articulations, a power which is not possessed in any degree by the roots of trees. Whether the caudex of the cuttings of *Camellias* above-mentioned, have emitted, or

will, or will not, emit roots, I am not yet prepared to decide, but I entertain very confident hopes of success.

T. A. KNIGHT.

ARTICLE V.

A DESCRIPTIVE LIST OF CAMELLIAS.

BY CAMELLIAS.

(Continued from Vol. VI.)

Pictorium coccinea, double bright red, large beautiful flower.

Formosa, double light red, large and fine.

Maria Dorothea, double white pink, spots or stripes.

Amiable, double rose, white centre, beautiful form, extra fine.

Delesii, double dark rose, large and good.

Fimbriata rubra, double fringed, dark red, good form.

Philadelphica, double deep rose, large and extra fine.

Pulcherrima striata, double rose, large white spot or stripe.

Jacksonii, double dark rose, blush centre, beautiful form, extra fine.

Pelegrina, double white, dark blood red spot or stripe, fine.

Anemoneflora sinensis, double striped warratah, from China.

Spectabilis Maculata, double white with red spots, or striped.

Fasciculata speciosa, double flesh colour, with white stripe, fine.

Superbissima grandissima, double dark red, extra large and fine.

Belle Rosalie, semi double dark red.

Celestina, double light rose, cupped petals, extra, fine form.

Lineata, double buff or blush, small red spots.

Variegata præcox, double light red, white stripes.

Reticulata novæ species, semi double light red, flowers from eight to ten inches across.

Francofurtensis, double rose, changing to a pale pink, flowers nearly as large as *Reticulata*.

Amanda, double, fine red, large and good.

Cloweana, double red, white spots or stripes.

Louise Philippe, double red, sweet scented, good.

Cardinal, single red, fine thick petals, large flower.

Frederic le Grand, double red, extra large, fine flower.

CAMELLIAS.

ARTICLE VI.

A LIST OF THE MOST SPLENDID SEEDLING GERANIUMS.

BY R. LONDON.

1. Prima Donna, Foster's, beautiful flower, with fine black spot edged with orange, white centre, fine form and free bloomer.
2. Joan of Arc, Garth's, like Perfection, very dark upper petals, excellent habit, free bloomer.
3. Jewess, Foster's, fine rosy pink flower, with upper petals entirely covered with black, extra fine.
4. Una, a beautiful pure white flower.
5. Queen Victoria, Eyre's, bright purple, sweetly blended with crimson, and shaded like *Cactus speciosissima*, fine dark spot, extra large, fine flower.
6. Efulgens, Jarvis's, upper petals dark carmine with dark spot, under petals crimson, the eye white blended with a purple hue, good form and habit.
7. Gauntlet, Gains's, very large rich orange scarlet, fine fiery red spot, exquisite form, free bloomer.
8. Calypso, Gains's, beautiful large rose, fine dark spot, good form and habit.
9. Phosphorus, Gains's, very bright crimson purple, large fine spot, excellent form and habit.
10. Lord Byron, Gains's, beautiful crimson, fine spot.
11. Momus, Gains's, dark crimson finely marked, very distinct flower, good form and habit.
12. Unique, Gains's, beautiful pink flower, fine large spot, fine form and habit.
13. Morning Star, Gains's, brilliant orange scarlet, very large fine flower.
14. Midford Castle, Gains's, pale rose flower with fine spot, good form.
15. Duke of Wellington, Gains's, deep rose, fine spot, a large and very showy flower, good form.
16. Lady Dillon, Gains's, very large showy blush flower, fine dark spot, good form.
17. Zearah, Gains's, colour of Perfection, very much pencilled, fine form, a superb flower.

18. Queen Victoria, Hodge's, beautiful rose, fine spot, free bloomer and excellent form.
19. *Purpurea perfecta*, Hodge's, rich purple, exquisite form, fine dark spot, clear and distinct, free bloomer.
20. Lady Elizabeth Bulteel, Rendle's, beautiful delicate pink, fine form, good spot, beautiful tinge of white about the centre, free bloomer.
21. Bride of Abydos, Rendle's, light pink, good spot, excellent form, and a fine trusser above the foliage.
22. Queen Victoria, Rendle's, very light rose, large splashed Alicea spot, good form and habit.
23. Hussey Vivyan, Rendle's, fine light crimson, excellent spot, free and most showy bloomer.
24. Sir Roberet Newiman, Rendle's, delicate pink, fine large spot very free bloomer, good habit.
25. British Queen, Barratt's, white ground, clear deep purple, feathered spot, form of Dennis's Perfection.
26. Queen Hebe, Barratt's, light rose ground, mulberry spot, fine large compact flower.

ARTICLE VII.

ON THE CULTIVATION OF CHLIDANTHUS FRAGRANS.

BY THE REV. F. BELFIELD, F. H. S.

HAVING been very successful in flowering *Chlidanthus fragrans* this spring and that too under three different modes of treatment it has occurred to me that you might like to be made acquainted with it.

In December last my friend Mr. Nugent gave me for the purpose of trying experiments, nine middle sized roots, which for the two preceding years had been growing in the open ground protected only by a frame in winter. On receiving them, they were put into dry earth and placed in the hottest part of the stove and kept perfectly dry, till the latter end of the month of March, when three roots were potted, watered, and kept in the hothouse; of these, two very shortly shewed their blossom buds, but only one came to perfection and did not seed.

In the end of April the six remaining roots were planted in front of the pine pit, and in the following month three of them flowered in the greatest perfection, but did not shew any dis-

position to form a seed pod. In the same border I have another bulb, which has been growing there two years, quite unprotected in winter. This in the month of June surprised me by not only throwing up a noble flowering stem, far exceeding any of the others, but also by perfecting its seed pod, and that without any artificial impregnation. As this may be a novelty, I have much pleasure in sending it to you; possibly its produce may be even harder than the parent bulb.

The border in which these plants have grown is particularly calculated for the culture of tender bulbs. *Brunsvigia Josephinæ* flowered there last autumn, with a stem nearly as large as my wrist, and a head of thirty six flowers, seeding abundantly; *Ismene calathina*, *Vallota purpurea* and many others flower annually. *Hæmanthus toxicarius* flourishes there, but has not blossomed.

F. BELFIELD.

ARTICLE VIII.

REMARKS ON THE ROSE.

(Continued from page 37.)

THE principal enemy of the rose is a species of fly, called the rose saw-fly, which pierces the tender flower-bud, and thrusts an egg into the puncture, which soon becomes a caterpillar, that nourishes itself by eating away the heart of the young flower and fruit, down to where it joins the stalk. It then loses its supply of nourishment, droops on one side and dies, whilst the insect spins itself a descending rope, by which it reaches the ground, and entombs its body in a silken shell, whilst its transformation takes place first into a chrysalis, and then a fly, which renews this work of devastation.

There are several flies of this genus, that are equally injurious to the rose tree. These flies are furnished with a very remarkable instrument, in the shape of a saw, by which they make small holes in the bark of the young branches, where they deposit their numerous eggs, which on the succeeding summer are hatched by the warmth of the sun, and nourished by the ascending sap, until they assume the appearance of small green flies, in which state they issue from the bark in such numbers, as to cover the tender

shoots and leaves, on which they rest, to suck the nutriment of the plant.

These flies may be known by a yellow body and a black head, with four wings edged with black. Another species of rose-fly has a head and breast of violet colour, with a body of yellow, and legs and wings of pale violet. It may be seen in a summer's morning, working on the branches of the rose tree, and from its sluggish nature will suffer itself to be taken between the fingers. The branches where it has deposited its eggs are so vitiated by it, that they are easily discovered, as they generally swell to a greater size than the parts above or below, and they often become black on the under side : when examined with a glass, the eggs may be discovered. These branches should be carefully cut off; and when the plants are covered with these insects, it is desirable to brush them off with a bunch of feathers or young elder branches, as they fix themselves too fast to be washed off by water.

Insects may be destroyed by placing a chafing dish with lighted charcoal under the bushes, and then throwing a little brimstone on the coals; but this must be done in small quantities, and carefully, lest the sulphur injure the plants.

The lady bird, so named, from the points or specks on its shell wings, haunts rose bushes to feed on the small insects commonly called blights. The brier and Scotch roses are frequently attacked by the *Cynips rosæ*, which, by puncturing the bark, occasions the production of those singular and beautiful flossy tufts, which are so frequently seen on wild roses. These rose galls contain several little cavities, in each of which is a small maggot. This substance was formerly used in medicine, under the name of *Bede-guar*.

The rose is too important a flower to have been overlooked by *Æsculapius*, who in old times used every part of this plant, from the root to the yellow anthers within the blossom, for some particular purpose in medicine, as may be seen in all the ancient medical authors. The kinds of roses principally used in modern practice, are the red and the damask. The latter is considered a safe and gentle purgative for children, when administered in infusion or by way of syrup.

The red roses are astringent, and particularly so when taken before they are fully blown; conserves are made of both these kinds of roses.

Ladies may make their own milk of roses, by simply adding

one ounce of the oil of almonds to a pint of rose water, after which, ten drops of the oil of tartar is to be added.

We shall conclude our history of the rose with the lines of the Ayrshire Ploughman.

" Never may'st thou, lovely flower
Chilly shrink in steely show'r !
Never Boreas' hoary path,
Never Eurus's pois'nous breath,
Never hateful stellar lights,
Taint thee with untimely blights !
Never, never, reptile thief,
Riot on thy virgin leaf !
Nor even Sol, too fiercely view
Thy bosom blushing still with dew !

May'st thou long, sweet crimson gem,
Richly deck thy native stem ;
Till some ev'ning, sober, calm,
Dropping dews, and breathing balm,
While all around the woodland rings,
And ev'ry bird thy requiem sings ;
Thou, amid the dirgeful sound,
Shed thy dying honours round,
And resign to parent earth
The loveliest form she e'er gave birth."

ARTICLE IX.

ON CHINESE GARDENS.

(Continued from page 40)

He mentions one of them, that cost upwards of two hundred thousand pounds, exclusive of the furniture ; another, consisting of a hundred rooms ; and says, that most of them are sufficiently capacious to lodge the greatest European lord, and his whole retinue. There is likewise, in the same garden, a fortified town with its port, streets, public squares, temples, shops, and tribunals of justice, in short, with every thing that is at Pekin, only upon a smaller scale.

In this town the emperors of China, who are too much the

slaves of their greatness to appear in public, and their women who are excluded from it by custom, are frequently diverted with the bustle of the capital; which is there represented several times in the year, by the eunuchs of the palace; some of them personating merchants, others artificers, officers, soldiers, shopkeepers, porters, and even thieves and pickpockets. On the appointed day each puts on the habit of his profession; the ships arrive at the port, the shops are opened, the goods are offered for sale; tea-houses, taverns, and inns, are ready for the reception of company; fruits and all kinds of refreshments are cried about the streets; the shopkeepers teize the passengers to purchase their merchandize, and every liberty is permitted; there is no distinction between persons, even the emperor is confounded in the crowd; quarrels happen—battles ensue—the watch seizes upon the combatants, they are conveyed before the judge, he examines the dispute and condemns the culprit, who is sometimes very severely bastinadoed, to divert his imperial majesty, and the ladies of his train. Neither are sharpers forgot in these festivals, the noble profession is allotted to a good number of the most dexterous eunuchs, who, like the Spartan youths of old, are punished or applauded, according to the merit of their exploits.

The plantations of their autumnal scenes consist of many sorts of oak, beech, and other deciduous trees that are retentive of the leaf, and afford in their decline a rich variegated colouring; with which they blend some picturesque forms that art or nature can suggest. Buildings, sculptures, and paintings are added to give splendor and variety to these compositions; and the rarest productions of the animal creation are collected to enliven them; nothing is forgot that can either exhilarate the mind, gratify the senses, or give a spur to the imagination.

Their scenes of terror are composed of gloomy woods, deep vallies inaccessible to the sun, impending barren rocks, dark caverns, and impetuous cataracts rushing down the mountains from all parts. The trees are ill formed, forced out of their natural directions, and seemingly torn to pieces by the violence of tempests; some are thrown down, and intercept the course of the torrents; others look as if blasted and shattered by the powers of lightening: the buildings are in ruins; or half consumed by fire, or swept away by the fury of the waters; nothing remaining entire but a few miserable huts dispersed in the mountains; which serve at once to indicate the existence and wretchedness of the inhabi-

tants. Bats, owls, vultures, and every bird of prey flutter in the groves; wolves, tigers and jackalls howl in the forests; half-famished animals wander upon the plains; gibbets, crosses, wheels, and the whole apparatus of torture, are seen from the roads; and in the most dismal recesses of the woods, where the ways are rugged and overgrown with poisonous weeds, and where every object bears the marks of depopulation, are temples dedicated to the king of vengeance, deep caverns in the rocks, and descents to gloomy subterraneous, habitations, overgrown with brushwood and brambles; near which are inscribed, on pillars of stone, pathetic descriptions of tragical events, and many horrid acts of cruelty, perpetrated there by outlaws and robbers of former times; and to add both to the horror and sublimity of these scenes, they sometimes conceal in cavities, on the summits of the highest mountains, founderies, limekilns. and glass-works, which send forth large volumes of flame, and continued clouds of thick smoke, that give to these mountains the appearance of volcanoes.

Their surprising or supernatural scenes are of the romantic kind, and abound in the marvellous, being calculated to excite in the mind of the spectator, quick successions of opposite and violent sensations. Sometimes the passenger is hurried by steep descending paths to subterraneous vaults, divided into stately apartments, where lamps which yield a faint and glimmering light discover the pale images of ancient kings and heroes, reclining on beds of state; their heads are crowned with garlands of stars, and in their hands are tablets of moral sentences; flutes, and soft harmonious organs, impelled by subterraneous waters, interrupt at stated intervals, the silence of the place, and fill the air with solemn sacred melody.

Sometimes the traveller, after having wandered in the dusk of the forest, finds himself on the edge of precipices in the glare of day-light, with cataracts falling from the mountains around, and torrents raging in the depths beneath him; or at the foot of impending rocks, in gloomy vallies overhung with woods; or on the banks of dull moving rivers, whose shores are covered with sepulchral monuments, under the shade of willow, laurel, and other plants sacred to Manchew, the genius of sorrow.

His way now lies through dark passages cut in the rocks, on the sides of which are recesses, filled with colossal figures of dragons, infernal furies, and other horrid forms, which hold in their mon-

strous talons, mysterious, cabalistical sentences, inscribed on tables of brass, with preparations that yield a constant flame, serving at once to astonish and guide the passenger; from time to time he is surprized with repeated shocks of electrical impulse, with showers of artificial rain, or sudden violent gusts of wind, and instantaneous explosions of fire: the earth trembles under him by the power of confined air, and his ear is continually struck with many different sounds, produced by the same means, some resembling the cries of men in torment; some the roaring of bulls and the cries of ferocious animals, with the yell of hounds, and the voices of hunters; others are like the mixed croaking of ravenous birds, and others imitate thunder, the raging of the sea, the explosion of cannon, the sound of trumpets, and all the noise of war.

His road then lies through lofty woods, where serpents and lizards of many beautiful sorts crawl upon the ground, and where innumerable apes, cats and parrots, clamber upon the trees, to intimidate him as he passes; or through flowery thickets, where he is delighted with the singing of birds, the harmony of flutes and soft instrumental music; sometimes in this romantic excursion, the passenger finds himself in spacious recesses, surrounded with arbors of jessamine, vine and roses, or in splendid pavilions, richly painted and illuminated by the sun; here beauteous Tartarean damsels, in loose transparent robes, that flutter in the scented air, present him rich wines, or invigorating infusions of Ginseng, and amber, in goblets of agate; mangostans, ananas, and fruits of Quangsi, in baskets, of golden filagree; they crown him with garlands of flowers, and invite him to taste the sweets of retirement, on Persian carpets, and beds of camusathskin down.

These enchanted scenes always abound with water-works so contrived as to produce many surprising effects; and many splendid pieces of scenery; amongst which their Kia-king, or water palaces, are the most extraordinary; they consist of many colonades, arcades, galleries, and open cabinets, formed of smooth sheets and jets of fair water, artfully rising or falling over grounds of different coloured glass, or over innumerable lamps, which varying the tints of the liquid, give to the structures the appearance and lustre of diamond, sapphire, emerald, ruby, amethyst and topaz.

(To be continued.)

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

1. *ERICA TRICOLOR*, v. *SUPERBA*. Superb Three coloured Heath.
(Pax. Mag.)

ERICACEÆ. OCTANDRIA, MONOGYNIA.

A good edition to this most charming and interesting genera; it was raised from seed supposed to have been saved from *E Tricolor*, by Messrs. Rolinsson's of Tooting; it bears a striking similitude to *E Tricolor*, v. *Major*, but differs by the tube of the flower being longer and larger, and presents a considerably more showy appearance.

2. *MAXILLARIA TENUIFOLIA*. Slender leaved Maxillaria.
(But Reg. 8.)

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

Introduced from Mexico by Mr. Hartweg, a collector of the London Horticultural Society, who found it growing upon trees in the neighbourhood of Vera Cruz. It is very probable, as it has not been produced in collections from the interior of the country, that it is entirely local.

It is a very pretty species with yellow, green, and scarlet spotted blossoms; it is of easy culture, and as Dr. Lindley observes, "succeeds in a warm damp stove in a pot, with a block of wood thrust into the soil, and the long branching Rhizoma tied to it; it grows almost equally well when tied to a wooden block, and suspended from the rafters of the stove; it bears without injury a quantity of water at its roots, and must also be freely syringed over head. It is easily multiplied as it throws out numerous pseudo-bulbs and roots, which if taken carefully off will soon become vigorous growing plants."

3. *SOPHRONITIS GRANDIFLORA*. Large flowered Sophronitis.
(Bot. Mag. 3709.)

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

Discovered growing at a considerable elevation on the Organ mountains, by Mr. Gardener, who sent it home in 1837. It is a handsome variety producing large flowers of an uniform red colour, inclining to orange, with darker red streaks. We have no doubt but it would succeed well with similar treatment to that afforded *Cattleyas*, &c.

4. *STATICE ARBOREA*. Tree Statice.

PLUMBAGINACEÆ. PENTANDRIA, PENTAGYNIA.

Introduced by P. B. Webb, Esqr., it is one of the most local and rare of all known plants. It is only on a few rocks called the *Islets of Burgado*, which seem as if broken off from the coast of *Teneriffe* by some violent convulsions of nature, carrying with them on their summits a little earth, that this rare plant is found, surrounded on every side by the ocean, and only a few yards removed from its surface.

It is highly ornamental, producing large clusters of flowers of a light blue colour, it is best adapted for planting out in the bed of the conservatory, and grows well in a mixture of heat and loam; it flowers from April to June. Plants may be obtained at most of the principal Nurseries.

5. *PHILIBERTIA GRANDIFLORA*. Large flowered Philibertia.
(Pax. Mag.)

ASCLEPIADACEÆ. PENTANDRIA, DIGYNIA.

A very pretty and interesting climbing shrub, of which we possess a drawing made during autumn, and it is our intention shortly to figure it in the 'Cabinet,' when we shall make further observations upon it.

6. *STANHOPEA TIGRINA*. Tiger flowered Stanhopea.
(Bot. Reg. No. 1, 1839.)

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

This truly beautiful species of *Stanhopea* was originally received from the neighbourhood of Xalapa, by Messrs. Low & Co., of the Clapton Nursery; and it is now we believe cultivated in several collections. This most singular novelty which is displayed in the formation of flowers by the various tribes of plants, none possess that remarkableness in so striking a degree as the trine under consideration; and our present species not only possess eminent singularity, but it is beautiful in its colour, and so strikingly blotched and spotted, together with its delightful fragrance as at once to become a subject of peculiar attention. We doubt not but it will soon be in the hands of many growers, as *Stanhopeas* are generally luxuriant in growth. The treatment required for this plant is similar to the other species, that is, sandy peat, with plenty of drainage, and small pieces of decayed wood, observing to raise the plant considerably above the level of the rim of the pot, otherwise the flowers would in all probability be confined within the pot as the flower stalks shoot downwards. Care must also be taken to allow the plant a proper season of rest when done growing, which will be a means of considerable acceleration to its vigour, during the forthcoming season.

ERRATUM. To the kindness of a correspondent we are indebted for the correction to our notice of *Hovea Manglesii*, and *Elichrysum macranthum*, December No. Vol. VI. We understand that these flowering plants had been introduced into this country by Robert Mangles, Sunning Hill, Berks, but our correspondent informs us, that the merit of introducing them, as well as a considerable number of the most showy of recent introduced plants, belong to Captain Mangles, R. N. That gentleman has been assiduously engaged for the last eight years, in introducing seeds from that most interesting portion of the globe, the Swan river colony. To accomplish so desirable an object, Captain Mangles went expressly on purpose, to see the Flora of that country, and resided there for some time.

To contribute to the pleasures of those interested in beautiful flowering plants, in this country, Captain Mangles has expended a very considerable sum of money; and equally so in procuring and sending out presents of plants, books, Maps, &c. from this country, to Botanists resident at the Swan River colony, Ceylon, South Australia, Valparaiso, and other places, with a view to stimulate them to collect and send seeds, &c. to this country.

Immediately on receiving packets of seeds, with a liberality which entitles Captain Mangles to the thanks of every botanist in this country, they are distributed gratuitously to the principal nurserymen, and other plant establishments belonging to the Nobility and Gentry. We wish those persons having connexions in the distant portions of the globe would imitate the very laudable zeal of Captain Mangles, introducing seeds or plants, and which in many instances might be procured at but a small expence, we should soon have plants in our collections of many splendid flowers, of which we have only had descriptions, or a specimen sent us.—Conductor.

ANEMOPSIS CALIFORNICA. We saw this plant at the Epsom Nursery, producing its pretty blue flowers of a *Ranunculus* form. The plant is a dwarf grower, but flowers freely.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

A LIST AND PRICES OF THE BEST KINDS OF POLYANTHUSES.—Will the Editor, or some reader of the "Floricultural Cabinet," be kind enough to give me a list of the names of the best prize Polyanthus, also where they are most likely to be obtained, and at what probable price.

AN AMATEUR, AND CONSTANT READER OF THE CABINET.

London, Jan , 7th, 1889.

ON WATERING PLANTS, &c. WITH WATER FROM METAL OR CAST IRON PIPES.—Having a greenhouse as well as two houses for the cultivation of Grapes, Pines, &c., and which are heated with hot water; I should feel obliged if you, or any of your numerous correspondents would answer the following question. (Perhaps Mr. Thompson who has wrote a few such valuable pages in the "Cabinet," and who, I believe has published a Treatise on the Hot Water system, would do me the favour; or any one who understands a little of chemistry.

The supply of water for the use of these houses is obliged to be drawn from the hot water pipes, and I have more than once attempted to hold an argument with my employer on the bad effects which will be produced from such practice, and have urged the necessity of a proper cistern to supply the plants, Grape Vines, &c., but yet have not been successful, as he believes water from the pipes to be full as beneficial to vegetation as any other. My opinion is, that water after being boiled, must have lost the greater portion of its nutritive properties, in addition to rusting all bunches of Grapes that may be syringed by such water; however when the question is answered, I shall feel more satisfied, and then let the matter rest.

Hamburg, Nov., 27th, 1838.

ON VIEUSSEUXIA PAVONICA.—Our old and respected correspondent "Burriensis," whose letter we published in our Number for April, complains that no answer has been given to his enquires respecting the above bulb, and he will feel much obliged by being informed where it can be procured; it is evidently different from the *V. Glaucopsis*, of which he has many bulbs, which flower every year.

Aiton's Epitome of the 'Hortus Kewensis,' is by mistake called *Reivensis* in the above letter of Burriensis.

Loudon's 'Hortus Britannicus,' page 20, *Vieusseuxia*.

No. 1358. *V. Pavonica*, *Moræa Pavonia*, *Iris Pavonia*, Peacock. Introduced in 1790; coloured in Bot. Mag., table 1247.

No. 1361. *V. Glaucopsis*, *Iris Pavonia*, Grey eyed. Introduced in 1776; coloured in Bot. Mag., table 168.

Swart's 'Hortus Britannicus,' page 496, *Vieusseuxia*.

No. 2. *V. Pavonia*, Peacock, *Moræa Pavonia*, *Iris Pavonia*. Introduced in 1790; coloured in Bot. Mag., table 1247.

No. 5. *V. Glaucopsis*, White flowered. Introduced in 1776; coloured in Bot. Mag., table 168.

The colours of the first are stated to be orange, &c.
The colours of the second are stated to be white and blue } Called *Moræa* in Curtis's Bot. Mag.

AITON's *Epitome of 'Hortus Kewensis,'* edition of 1814, page 16, *Moræa*. Pavonia, Peacock. Bot. Mag., table 1247; introduced in 1790.

I can find nothing in AITON answering to *V. Glaucopsis*, under any name, either in the body of the book, the addenda, or index synonym.

'*Hortus Cantabrigiænsis*,' tenth edition, by LINDLEY. 1823, page 21, *Moræa*.

No. 11. *M. Pavonia*, Peacock. Bot. Mag. 1247; introduced in 1790.

I cannot find anything answering to *V. Glaucopsis*.

SWEET's '*Hortus Suburbanus Londinensis*.' 1818, page 11, *Moræa*.

No. 4. *M. Pavonia*, Peacock. Introduced in 1790; Bot. Mag. 1247.

Nothing answering to *V. Glaucopsis*; but, from the '*Hortus Britannicus*,' of SWEET & LONDON, it is clear that they are different bulbs, introduced at different periods, differently coloured in the Bot. Mag., table 1247, and table 168; and yet I cannot for love or money procure the *V. Pavonica*, nor have any information respecting it. The London Seedsmen or Nurserymen know no distinction, and still in their catalogues retaining the old name and not *Vieusseuxia*. I cannot find the word *Iris Pavonia* in any catalogue, but that in CRISHING's '*Exotic Gardener*,' page 211, the third line from the bottom of the second column. (Printed 1814.)

I have no other catalogue to which I can refer, but it is very singular that it is (the *Glaucopsis*) not mentioned in AITON, DONN. & SWEET's '*Horticultural Suburbanus*.'

REMARKS.

ON CONVEYING GRAFTS OF TREES. Professor Jussone has ascertained that the best mode of conveying grafts of trees, cuttings of vines, &c., is to place them in a tin case or cylinder filled with honey; the honey hermetically excludes the air, and cuttings so preserved, will vegetate many months after they have been packed. [See *Conversations on Nature and Art*, by a Lady, Vol. i. p. 60.]

ON THE SCOTCH AND LARCH FIRS. The late Duke of Atholl ascertained that whilst the Scotch Fir only thrives at an elevation below nine hundred feet in the north of Scotland, the Larch ascends to one thousand six hundred feet, and may ascend still higher. At Leach Hills in Lanarkshire Scotch Firs will not grow, and all other trees are stunted, excepting Larches, which thrive luxuriantly where protected. The heaths in Scotland when they are not cultivated, may be adorned with wood; and almost all the hills in England may have Larches growing on their summits. Instead of importing timber from other countries, we may then have more than we require; and thus obtain new resources from being the exporting nation.

[Compressed from an Article in the '*Saturday Magazine*,' Dec. 15th, 1838, quoted from the '*Magazine of Popular Science*.']

ON RANUNCULUSES. We would take the opportunity here of drawing attention to Tyso and Son's advertisement, of Ranunculuses. It is not, of course, the case that all situations are favourable for the successful cultivation of this splendid flower; those, however, who possess a rich dry and rather sandy soil, and are in any way concerned in the production of showy flowers, will not be disappointed in the return usually made by a well grown bed of Ranunculuses, when in full bloom.

Mr. Tyso has also favoured us with his sheet catalogue, containing descriptive lists of Ranunculuses, named sorts, and seedling Tulips, Geraniums, Carnations, Picotees, Pinks, Dahlias and Pansies. This is the best arranged, the most comprehensive, and explicit sheet catalogue we have seen. It contains a table of abbreviations, by which the colours are minutely and clearly described.

THE GARDENS
OF THE
ROYAL BOTANIC SOCIETY OF LONDON,
INNER CIRCLE, REGENT'S PARK.

(Continued from page 46.)

Mr. D. R. Hay, of Edinburgh, an able writer on the subject, gives testimony to the following effect:—"The vegetable kingdom presents the best examples for study, and a taste for ornamental design is not only to be acquired from the rare productions of the botanic garden, but both grace and elegance of form are to be found in the common dock, the thistle, the fern, or even in a stalk of barley. When students come to examine the ornamental remains of Athens and Rome, they will find themselves familiar with the source from which such designs were derived, for the ancients undoubtedly owed their excellence in ornamental art to the study of nature. Dr. Ure attributes the excellence of the French to the pursuit of art through the medium of nature."

The Chancellor of the Exchequer recently expressed himself in the House of Commons to the following effect:—"He thought it a disgrace to this country, possessing as it did so many colonies, and such vast means of collecting botanical specimens from all parts of the earth, that it should be without an extensive botanical garden, for the benefit of medical students and other scientific persons."

While the importance of botanical study is such in the lower walks of art, it is not of less necessity in its higher and more unequivocal branches. The delineation of the flower has in all countries afforded many fine paintings, a branch in which ladies have been particularly successful, and in which it was the pride of Rubens to excel equally as in the other departments of art. In all that relates to decoration, however, its application is of primary importance. Foliage is the basis of the arabesques of Pompei, and those of Giulio Romano; and while an increasing inclination is exhibited for these styles among the patrons of art, the only true source of their power should not be neglected. The details of architecture have, even in the severest nations, derived their origin from this source, and the palm leaf of the Temple, and the lotus of Egypt, were not less favourite with their respective admirers than the variegated foliaged ornaments of the Greeks. These latter, in the acanthus and the honeysuckle, found a harmony and beauty which they made productive of the greatest effect, while the Gothic architects, in the profusion of their architectural enrichments, displayed even greater variety and research.

Although we who are the most important commercial nation of the world, have been thus negligent in our metropolis, foreign nations, to whom botany is of far less pecuniary interest, have not been unmindful of encouraging its study. Whether for medical purposes, or for those purely scientific, or on a more extended scale, there is scarcely a town in Europe without its botanic garden, and the extent of these establishments, and the efficiency of some of them, is enough to cast shame on the negligence we have hitherto displayed. The garden at Padua appears to have been the first established in Europe, and was founded in the early part of the sixteenth century, and shortly after others were formed at Pisa, Florence, and Bologna. Since that period the progress has been such, that there is hardly a city in Italy without its botanic garden, although considerable difficulty is felt there on account of the necessity of supplying water by irrigation. The Dutch early cultivated this department, and from the garden of Amsterdam supplied the coffee plant from which all those in the French colonies have been propagated. In France, the first establishment of this kind was formed at Montpellier in 1597; but, by far the best known, and the most important in Europe, is that of the Jardin des Plantes at Paris, founded in

1610. This institution merits particular notice, especially as it is a central one, and has long enjoyed the benefit of a regular administration. Its objects are twofold: first, to collect useful and remarkable plants from every part of the world, and to distribute them as far as practicable, to every part of France, and to other countries; and secondly, to form a school of botany and vegetable culture. Plants are brought to the garden from all countries by a universal correspondence; by particular naturalists, sent out at the expense of the nation; and by the general protection of the government, which allows entrance, free of duty, and general carriage, free of expense, to all plants brought for the use of the garden, by whatever kind of vessel. Plants received in Paris are propagated without loss of time, and distributed to all the botanic gardens in France, and to such of the colonies where they may be useful; and, lastly, they are sent to foreign correspondents in return for similar favours. The provincial botanic gardens, of which there is one at least in every department, distribute them again among the eminent proprietors and cultivators in their neighbourhood. Instruction is given by lectures, to which the public are admitted, and by practical demonstrations. In Germany, botanic gardens are attached to every university, and in Austria the science has met with the greatest encouragement from the enlightened munificence of the sovereigns, who have neglected no opportunity of sending exploratory expeditions to collect plants. The garden at Berlin is esteemed the first in Germany. Those at Munich displays equal taste with the other foundations of the king of Bavaria. In Saxony and Wirtemberg are admired gardens; and this latter country possesses a private society of subscribers, of £1 each, for sending out travellers to collect plants in every part of Europe. In Switzerland there is a botanic garden in every canton. In Sweden, the establishment at Upsal is celebrated as having been under the direction of Linnæus. In Russia, the botanic garden of St Petersburg, containing sixty acres, is one of the largest in Europe, and is maintained with a munificence worthy of the scientific patronage of that empire. A considerable part of it is devoted to the cultivation of medicinal plants for the hospitals; and it is a central establishment for the use of the empire. In Spain, among others, is that of Madrid, containing forty two acres, which like the great garden of St. Petersburg, cultivates medicinal plants. There are numerous other gardens in different parts of the world, as will be seen by reference to the statistical table annexed.

(TO BE CONTINUED.)

NEW OR RARE PLANTS.

CHOROZEMA DICKSONI. Named in compliment to the respectable nursery-men Messrs. Dickinson's of Edinburgh. It is stated by those gentlemen to be the finest species yet introduced, we saw it in several of the London nurseries, but not in bloom. The plant is of a bushy habit, foliage small and fringed; it is a very pretty plant when not in bloom, but as all the other species are handsome, we doubt not but this will be found deserving a place in every greenhouse.

PHYLOBIUM ELATUM. A beautiful flowering greenhouse plant, very much resembling *Kennedia coccinea*; it has been received from South Australia, and will prove an interesting addition to that lovely tribe of plants to which it is so closely allied. We saw it at the Tooting Nursery.

OXYLOBIUM CAPITATUM. A very fine species recently introduced, producing fine heads of yellow and crimson flowers, rendering it a very desirable plant for the greenhouse. It is grown at the Tooting Nursery.

FLORICULTURAL CALENDAR FOR MARCH.

ANEMONES—should now be planted as early in the month as can be done.

AMARYLLIS's—and other liliaceous bulbous plants which have been kept dormant may now be re-potted, and put into an increased temperature.

ANNUALS, HARDY,—if the soil be moderately dry, some of the most hardy kinds to bloom early in the summer, may be sown in warm parts of the country, or situations well protected, early in the month, but in cold places not until the end of the month; for if the seeds of many sorts have begun to vegetate, and frost operate upon them, they are often destroyed. The best method of sowing the small seeds in patches is, to have a quantity of finely sifted soil; spread a portion where desired, after scattering the seeds, sprinkle a little more soil over them, and then press it closely upon the seeds which will assist them in vegetating properly.

ANNUALS, TENDER—such as have been sown and may be up, should have all possible air given to prevent their being drawn up weakly. In watering those in pots they must not be watered over the tops, or many of the sorts will be rotted by it. The best method is to flood over the surface of each pot, always using water that is new milk warm. Those annuals sown in frames must be watered (when requisite) with a very fine syringe, or pan rose to sprinkle with; but the best plan is to take advantage of gentle rains. For any seeds yet requiring to be sown use fine soil pressed to the seeds, and when convenient, place the pots (if used) in moist heat till the plants are up.

AURICULAS—those requiring top dressing should be done immediately, by taking off about two inches deep of the top soil, replacing it with some very rich, more than one half of it should be rotten cow dung two years old, and the rest loam and sand. Immediately after this dressing, let the soil be well settled by a free watering. By the end of the month the unexpanded blossoms will be nearly full grown; no water must be allowed to fall upon them, or the blossoms would be liable to suffer injury by it. All possible air may be admitted to the plants during the day, only screen from cutting frosty winds.

CARNATIONS—at the end of the month, the last year's layers kept in pots or beds during winter, should be planted off into large pots 12 inches wide at the top, 6 at the bottom, and 10 deep. In each pot three plants may be placed triangularly, not planting deeper than to fix them securely. The following compost is most suitable. Two barrows full of fresh yellow loam, three of well rotted horse-dung, and half a barrow full of river sand, well mixed; plant in it without sifting, but breaking very well with the spade, place the plants in a sheltered situation out of doors.

CREEPERS—and twining greenhouse or hardy plants, should be pruned and regulated before they begin to grow.

CALCEOLARIA SEED—should be sown early in the month, having the finest sifted soil for the surface.

CAMELLIAS—those kinds done blooming should be immediately potted, for if allowed to push the least before this is done, the operation frequently kills the tender shoots. In potting, &c., never cut the matted roots, but shake the soil off, and replace with what new soil may be required. If the balls are not matted with roots, just loosen the outer fibres with the hand, which will induce them sooner to push into the soil. A very free drainage is required, or the plants will never flourish. The following is very good compost for growing them in:—One barrow full of rich loam, half a ditto of

peat, half a ditto of very rotten dung, or rotten vegetable mould, and one third ditto of Calais, or other fine sand. Never use sifted soil, but well broken. As soon as the plants are potted, place them in a temperature of about 68 degrees of heat by day, and 60 by night. This will cause them to push more vigorously, and more certain to induce flower buds.

DAHLIAS—if not already put into excitement, should be done as early as possible. Seeds should also be sown, placing them in a hot bed frame till up.

GESNERIA, GLOXINIA—and **TROPEOLUM** bulbs, that have been kept dry during winter, should now be potted, and be gently brought forward.

HYDRANGES—cuttings may now be taken off, cutting off the tops of any shoots that have very plump leading bulbs, about one inch below the bud of each cutting. These inserted, each into a small pot, and placed in moist heat, will soon strike root, and will, with future proper treatment, bloom one fine head each, strikingly beautiful.

PELARGONIUMS—cuttings now put in, struck in a hot bed frame, and potted off as soon as they have taken root, will bloom during autumn.

POLYANTHUSES—should now be top dressed, as directed for Auriculas, only the soil need not be so rich. Seed may now be sown; the best method is to raise it in heat, harden gradually, and transplant when large enough.

RANUNCULUSES—should now be planted, taking care no fresh applied dung is in the soil, nor should the ground to plant in be lightened up more than two inches deep. The soil of the bed should be half a yard deep at the least. The best roots for flowering are such as have the crowns high and firm, with regular placed claws.

ROSE TREES—not yet pruned, if allowed to remain untouched till the new shoots of the present coming season be about an inch long, and be then shortened by cutting back all the old wood to below where the new shoots had pushed, the dormant buds will then be excited, and roses will be produced some weeks later than if pruned at a much earlier season. Plants in pots now put into heat, will come into bloom in May.

TUBEROSES—should be planted, one root in a small pot, using very rich sandy soil; the pots should be placed in moist heat till the plants are up a few inches, then they may be planted into larger pots, and taken into a stove, and finally into a greenhouse.

TULIPS—at this season such as happened to be affected by canker will appear sickly, the roots should be examined, and the damaged part be cut clean out. If left exposed to sun and air, the parts will soon dry and heal. Avoid frosty air getting to the wound by exposure.

REFERENCE TO PLATE.

CHILODIA SCUTELLAROIDES. A greenhouse plant, which, when in full bloom is very interesting and showy; the plant is a most profuse bloomer, and continues to flower for a considerable time. We saw it at the Epsom Nursery during the last summer.

ONCIDIUM FORBESII, Mr. Forbes's. This very splendid stove orchideous plant bloomed at Woburn Gardens during the past summer, and a friend of ours states, that when he saw it, it was the most striking of the tribe he ever saw. It was discovered on the Organ Mountains, in 1837. We are glad that it has been named in compliment to the very talented and excellent gardener at Woburn Abbey, (Mr. Forbes,) under whose skilful management, the gardens and grounds have attained a high degree of perfection.

THE FLORICULTURAL CABINET,

APRIL, 1st, 1839.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I. ON THE CULTURE OF THE DAHLIA.

BY A CONSTANT READER.

THE Dahlia is allowed to be one of the most splendid plants that we know of, and is justly prized by every denomination of persons, whether they rank in the higher classes of society, or to those of more humble pretensions, whether as it regards the brilliancy and variety of colour in the flowers, the duration of time it remains in bloom, and its fine appearance, it certainly stands in each particular unrivalled, and merits a situation in every garden, and it is an additional recommendation, that it is both easily cultivated and propagated.

The best mode of treatment practised with the Dahlia has been requested through the medium of publications; and although I am not so conceited as to think the method I practice is the best, yet having been so successful as to flower the plants to the satisfaction of hundreds of persons who have seen them, I venture to give a brief and plain detail of my practice; in doing which, I shall state the mode I have adopted in raising a number of handsome seedlings, as well as the subsequent culture.

New varieties are raised from seed, and with a view to raise the best kinds, artificial impregnation is required. With a small
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pointed camel's hair pencil, I take the farina from one flower to another. If I have a handsome compact flower that I wish to improve in colour or size, I have recourse for farina from one of the colour or form I desire ; as it is very nearly to be calculated what a mixture of any two sorts will produce. The flower I intend to impregnate upon, I cover with a fine gauze bag, a day or two before the florets expand. When the first and second tier of florets are fully opened, I then impregnate them, and retain the gauze-bag over them for a week longer, and I then mark the flower which I have operated upon. In collecting the seed in autumn, I only gather the two tiers ; the seeds from the outside tiers are always the finest, and ripen the best. The use of the bag is to prevent impregnation from bees. When any flower is semi-double, I uniformly take them away ; so that I neither take farina from them, or save them for seed.

The seed is sown about the first of February, and placed in a hot-bed frame ; when sufficiently strong for transplanting, the plants are removed into small pots, one in each pot, and kept in a green house or cool frame. At the end of May, they are turned out entire, into a deep and rich soil. They then flower freely by the end of July, and being forwarded as stated, the roots become perfected by the autumn, so as to keep plump through the winter.

The method I pursue with old roots, is to place them upon a moderate hot-bed, or in a mushroom-house, that has a little heat. I just cover the roots with some fine sifted rotten tanners bark, in this way they speedily push roots. I usually do this in the first week in February, which I consider quite early enough, as my plants get to two or three feet high, by the period of planting in the open border. I have known some persons push the roots as early as the beginning of January, but in consequence of those being deprived of sufficient air, which is dangerous at this season to be given, they were generally drawn up weakly, and seldom bloom well.

When the roots have pushed shoots about four or six inches, I take them out of the bark ; such roots as can be divided, now most readily do so. If any of the roots push more shoots than one, and I wish to increase the sort, I cut off each shoot close to the old root : these I insert in pots, filled with fine light sandy soil, placing them round the sides of the pots, and putting them into a hot-bed frame, or if it is more convenient, I set them off upon a

hot-bed covered with four inches of suitable soil; in either case they will strike root in six or eight days. In cutting off the shoots close to the old roots, I find they strike much more freely than if cut crossways under a joint, in the upper part of the shoot, although there is a possibility of their striking under that mode of treatment.

When the cuttings have pushed roots, I pot each into a separate pot, and the soil I use for potting my Dahlias in, is a light rich one. When the Dahlias are potted, whether old roots or cuttings, I place them in a peach-house or vinery, till they push to eight or ten inches long, then I have them removed to a very airy situation in the garden, and where I can have them protected if the weather should become unfavourable.

As soon as I consider the danger from frost is over, which is seldom before the end of May, I turn the plants out entire, planting them in sheltered sunny situations.

The soil of my borders is a strong loam, eighteen inches deep. I manure the border well every spring before planting, and at the same time add about an equal part of good fresh soil. In this they flower profusely, particularly the plants raised from cuttings.

The plan of training the plants to a fence, appears to me to be the best mode of securing them, for when tied up to stakes, the wind frequently twists them, and destroys their tops, but the other mode secures them against all winds, and exhibits the flowers to the greatest advantage; three or four stakes placed angularly round the plant, and the plant tied to them, also answers the purpose.

When the blooming season is near its close, I lay about four inches thick of rotten bark, or leaf soil, over the roots, and for two feet round the stem of each plant; this is done to prevent the crown of the plant being damaged by sharp and sudden frosts. I have seen many Dahlias that were exposed, have the crowns so injured by sudden frost, as not to push at all the following spring, although the remainder of the root was sound.

When I take up my roots, it is on a dry windy day, if possible, shaking off the soil carefully, so as not to twist the roots. I have them removed to an airy situation in a shed, or in the mushroom-house; there placed singly over the floor or shelves, till the soil remaining on the roots is dry. When that is the case, I lay them on shelves, secure from damp or frost, and cover them with dry

sifted tan, manure from a mushroom bed, or some material of this kind; if this mode is adopted, they will keep perfectly sound and fresh. Great care must be taken, that whatever is used for covering the plants must be completely dry.

A CONSTANT READER.

ARTICLE II.

ON THE GERMINATION OF SEEDS.

BY A BOTANIST.

THE subject of the present essay concerns a new method of furthering the germination of seeds, in which I have made some experiments, which, I think, may be beneficial if better known; and for the proper understanding of which it will be necessary to preface the subject by a short explanation of the theory of the reproduction of plants. In flowerless plants, the class Cryptogamia of botanists) reproduction takes place by means of homogeneous masses of cellular substances, called sporules or spores; in ferns, on the back of the leaf; in mosses, in small capsules or urns; and in lichens and fungi, from tubes buried in the substance of the plants. Unlike the germ of flowering plants, they contain no cotyledon, radicle, or plumule; and instead of growing uniformly from two constant points of their surface, they are mere masses of cellular substance, and send forth their roots from whatever place happens to have been covered, and the stem from that portion exposed to light. In the more simple forms of fungi and lichens, the subject is involved in such mystery, that many have thence contended for equivocal generation, or a common matter of vegetation, which issues into various forms, according to accidental circumstances. It is, however, more consonant to observation, and to the method and wisdom displayed by the Creator in those parts of his works, more tangible to our senses (especially when we take into consideration the millions of millions of sporules contained in a single fungus, as the common puff ball, or the many hundreds in the common blue fungus of the cheese,) to suppose that they are reproduced by myriads of microscopic pores floating in the atmosphere, dispersed by currents of air, and only called into existence when the accidental circumstances of moisture, putrefaction, &c., necessary to their developement are present.

In flowering plants reproduction takes place by means of the germ or embryo contained in seeds, and in the tubers and bulbs of the root. In the seed, the germ develops into radicle or root, and plumule and stem, between which is an axis connecting the two, and communicating with the cotyledons or seed lobes, which contain the food destined to nourish the young plant till able to extract nourishment from the ground for itself. A deposition of this food is likewise laid up in the cells of the bulb or tuber, and to it the general name of albumen, from its fancied resemblance in functions to the white of an egg, has been given. It is generally enclosed in a hard or bony case, for protection from injury, (but which it is not necessary to the growth of the germ,) and consists of mucilage or gum, sugar, and fecula or starch, which are all convertible substances, consisting of different proportions of carbon, hydrogen, and oxygen, which by chemical analysis, have been found to stand as under, viz.

	Carbon.	Oxygen.	Hydrogen.
Gum to consist of	42:28	50:84	6:93
Sugar - - -	42:27	50:63	6:90
Starch - - -	43:55	49:68	6:77

By the continued deposition of carbon, very ripe seeds and tubers contain more starch or flour than unripe seeds: and from the difficulty of reducing starch again into mucilage, which must take place in the vegetating process, before it can be rendered a soluble food for the young embryo, ripe seeds will be found to keep longest, and to survive accidents of bad treatment better than unripe seeds; which, however, from having their food in a state more easily rendered soluble, are found both in seeds and tubers to spring more quickly, and if sufficiently far advanced, with more vigour than ripe seeds or tubers. In the process of germination, when carried on in the usual manner, if a seed is picked up, the cotyledons will be found filled with a soft mucilaginous substance, generally of a milky colour and sweetish taste. This is the food of the young embryo reduced into a soluble state, and is conveyed through the vessels of the cotyledon to the axis, and thence to the radicle and stem. On the quantity of this food furnished depends the vigour with which the young plant will shoot; and hence the best means of reducing the albumen of the seed or tuber into a soluble food in the speediest manner, and in the greatest quantity, is the greatest desideratum

to arrive at in prosecuting our enquiries after the best method of furthering the process of germination. The starch and sugar must be reduced to mucilage; and from an inspection of the table, it will be found necessary that carbon must be abstracted, and oxygen and hydrogen added; and, accordingly, it is found that in germination, carbonic acid gas is given off, the air is deprived of part of its oxygen, and water yielding hydrogen and oxygen, is absorbed. Air, heat and moisture are all necessary, and likewise the exclusion of light. The air yields the oxygen necessary in abstracting the carbon in the state of carbonic acid, from starch, and converting it into sugar and mucilage, which may be familiarly illustrated in the sweetness of malting grain and germinating potatoes. A heat of 160 degrees is required to reduce starch to solubility; and it is not generally known how such heat is generally acquired. The disengagement of the oxygen sets caloric free, and hence seeds moistened and thrown into a heap to germinate, are found to generate a great heat. Alkalies are also found useful in furthering the process, and are generated whilst it is going on. Perhaps, also, the starch is more soluble in its state of combination than when extracted; and, to all perceptible causes, we must add that vital energy so every where necessary, and so little known.

In soils which have been properly prepared, by being broken into very small particles, confined air is generated, which so increases the heat as to be perceptible even to the touch; and hence the benefits of well-pulverized ground, and of covering with pieces of glass, and flower-saucers, &c. to increase the heat and retain the moisture, and thus further greatly the vegetation of the seeds; and hence the different quantities of heat and moisture requisite for seeds, according as they are dry and farinaceous, or oily and mucilaginous. Very dry farinaceous seeds, as the acacia, and others of that tribe, are benefitted by immersion in boiling water; and hence the reason why either heat or moisture of itself is not sufficient, and even hurtful if carried to excess, either in the germination of seeds, or the bud or embryo of the tuber of the potato, as late illustrated in the three last consecutive springs, in which, from the drought and heat acting on the substance of the newly cut tuber, without the advantage of moisture, the albumen has not been reduced into a soluble food, or in such small quantities as not to be sufficient to produce the development of the bud or shoot.

I now come to that part of the subject where, from the explanation already given, I hope it will be in my power to explain the reasons why I was induced to try the experiments I set out with taking notice of, and which I hope will be found, on proper trial, to be very beneficial. It is to seeds damaged by being too long kept in a dry state, or hurt by too much fire heat, or heat of the sun, that my attention has been principally directed. It has been often recommended to apply substances readily yielding oxygen; and I have myself tried oxalic acid frequently, but without any perceptible effect; and from experiments lately instituted, it appears that more than the quantity of oxygen, or about one-third contained in common air, is not beneficial, though this proportion is absolutely necessary.

Experiments lately made by Mr. Charles Maltuen, and narrated in Brewster's Journal of Science, he found that the negative or alkaline pole of a battery caused seeds to vegetate in much less time than the positive, and he was thence induced to experiment on seeds in glasses filled with acetic, nitric, and sulphuric acids, and also in water rendered alkaline by potash and ammonia. In the alkaline the seeds vegetated in thirty hours, and were well developed in forty; while in the nitric and sulphuric, they took seven days; and even after a month, they had not begun to grow in the acetic acid. The great benefit of the alkalies in hastening the germinating process being thus so apparent, I was induced to experiment on lime; a very easily procured alkali, and which I reckoned to be more efficient than any other, from the well-known affinity of quick, or newly slacked lime for carbonic acid. Lime, as taken from the quarry, consists of carbonate of lime, or lime united to carbonic acid: and, in the act of burning, the carbonic acid is driven off; and hence the great affinity of newly slacked lime for carbonic acid. I depended therefore, on this affinity to extract the carbon from the starch assisted by moisture, in aid of the heat disengaged in this process, and also in the above well attested effects of alkaline substances in hastening the process of vegetation; and in the spring of 1835 having a quantity of old spruce fir seed, I was determined to try the experiment.

It is well known by nurserymen, that the seed of the spruce fir will scarcely vegetate the third year, although kept in the cones; but, in the present instance, the seed had been out of the cones during all that time; and the year before, or second year of the seed, had been so weak, that although well damped, and

sown a great deal thicker than usual, in a favourable state of the weather, and in ground in good condition, still it came through very thin, yellow in the colour, so weak, as scarcely to be able to free its cotyledons from the ground, and not producing one-third of a crop. Thus, under ordinary circumstances, after keeping the same seed a year longer, we had little reason to think it worth sowing. I, however, caused the seed to be well damped a few days before sowing, and then added slacked lime, the influence of which was not long in being manifest. The year before when the two-years-old seed had been damped, it swelled none, but acquired a mouldy smell; on the contrary, this third year, after the quick lime had been added, it swelled off plump and full, and had all the sweet smell of fresh germinating seed. It was sown very thick, but the plants started fresh and vigorous through the covering of soil, of a dark green colour, and in such quantity as to produce a crop much thicker than usual; and the plants grew and thrived as well as in the first year of the seed. I tried the same experiment this year; but from the unprecedented long-continued dry weather, it had not a fair trial: although however, four years old, the crop is still about the same thickness as some fresh Scotch pine seed sown on the same day beside it, and the plants equally strong. I tried it on some magnolia seed, the seedlings of which have this year grown with more than their accustomed vigour. As the whole of the plants may be seen, for very little trouble, in our nursery grounds (at Kilmarnock), and as the good effects, I think, have been made apparent, I hope it will not be considered trespassing too far on your time to give a detail of the method I would like pursued. Let it be understood that the nature of the experiment applies only to seeds in which the albumen has become hard and dry, from long keeping, kiln-drying, exposure to a hot sun in crossing the equator, &c. and not to such as have been wasted, and the albumen destroyed or damaged by moisture, heating in a green state, &c. or when it is wanted to hasten the ordinary process of vegetation in seeds that are tardy. Let the seed to be experimented on be spread on a floor, or in a box or saucer, according to quantity, and thoroughly damped (more or less according to the nature of the seed, as to its naturally dry or oily condition); let the whole be well mixed together so as every seed may receive its proportion of moisture from one-eighth to one-tenth of the bulk; and mix the seed again well, so that each may receive its proportion of lime; lay it up in a heap, and, when it begins to get dry, have it turned and

mixed, and again damped; and continue this process for a longer or shorter time, according to the known habits of the seed as to speediness in vegetation, observing not to let it lie long in a dry state, in which the lime is rather prejudicial; and I feel confident, if these instructions are attended to, the result will be beneficial. Before quitting the subject, I would like to call attention to the immense use of alkalies in the vegetable economy. We have seen their use in furthering the germination of seeds; and lately has been narrated in our newspapers the good effects of quicklime sprinkled over the newly cut tubers of the potato: but it is in preparing the food of the plant, or in rendering manure into a soluble food for the plant, that their greatest benefits are to be found. The different constituents of plants (starch, sugar, mucilage, and lignine or fibrine,) are all composed of various proportions of carbon, hydrogen, and oxygen. The water absorbed by the root yields hydrogen and oxygen; and carbon being the only substance thus wanted, it has been tried to afford it, by exhibiting to the spongioles of the root carbonic acid gas in its pure state: but its quantity has always been undiminished, until mixed up with alkalies in a saponaceous matter, in somewhat of the proportions found to exist in manures of the kinds most beneficial to plants.—*Kilmarnock Journal*.

ARTICLE III.

ON FLOWERING THE ALOE VARIEGATA,

BY A CULTIVATOR.

HAVING been very successful in the flowering of the above species, I send you my mode of treatment, which, perhaps, you may deem it worthy of a place in your Cabinet.

After the severe frosts are over in the middle of May, the plants should be turned out in the open air, where they are not too much exposed to the wind, but so as to receive all the sun possible, taking care to use the watering pot very sparingly during the summer months, in order to check the growth of the plants. Once in every week let them be turned round to the sun in order to keep the plants in an erect and proper form, and by the first week in October they may be removed into the greenhouse, having washed and cleared them from all dirt and filth, giving them

plenty of air but little or no water until they are re-potted the latter end of March. In removing the plants at this season do not disturb the roots, but carefully remove all the outside earth, place them in pots of a size larger, adding a mixture of the following compost, &c.

One-third leaf mould, one-third of good rich loam, and one-third decayed pigeons dung, adding a small quantity of sharp sandy bog earth, let the whole be incorporated together previous to potting. Cover the bottom of each pot one inch and a half thick with coarse gravel, half the size of a common nut; place the plant in and fill up with the above compost, shaking the pots gently, in order to settle the whole together; place the plants again in the greenhouse, where they will be exposed to the full benefit of the sun for a fortnight longer, not giving them any water at the root until they are removed into a stronger heat, when they should be plunged up to the rims in a gentle bark bed, or hot-bed of dung, about 80 degrees of heat, occasionally watering the plants gently over their leaves with a little warm water. No water will be required at the roots until the plants are beginning to flower, when a little may be given. As the flower begins to advance, the pots may be raised up a little out of the bed, and finally removed to the end of the greenhouse, where the plants will remain in flower for a length of time.

After the plants have flowered and the blossoms decayed, they are to be placed in any part of the greenhouse at the back, until wanted again, just giving them as much water as will keep them alive. I have visited a great many different places where I have seen plants of every description grown well, but the plant I now send you my mode of treatment of, I never have found to be brought to that perfection which I have grown it myself.

A CULTIVATOR.

ARTICLE IV.

ECONOMICAL METHOD OF MANAGING CAPE HEATHS

BY CLERICUS.

BEING an admirer and cultivator of Cape Heaths, and having tried various experiments towards their perfect cultivation in this country, I take the liberty of sending you the mode which I adopt, which if you think worthy of insertion in the Cabinet, it

may possibly be amusing to some of your readers. From having tried various modes of treatment, I find that which is most conducive to the health of the plants is to keep them during the whole year in cold frames or cold pits, the frames plunged up to the brim, and the bottom on which the sand is placed being thoroughly dry; the lights in summer should be kept off during dull and cloudy weather, both night and day; but during clear sunshine, the plants should only be uncovered from four in the afternoon till nine the next morning; taking care that always in the middle of the day, to have the sashes on, and to give plenty of air. When winter approaches, the sashes must be drawn off, in mild dry weather daily, and covered with mats or some other covering during frosty nights, and in very severe weather. When there is no sunshine, they will also require to be kept on, and some dry litter or other loose material to be put around the frame. The advantages derived from plunging them in the sand are, that the frost never reaches any farther down than the surface of the soil, and that the plants will require little or no water from November till the middle of February, and that even during summer, they will not want water near so often as if they had stood upon the stage in the greenhouse, or out of doors along with the greenhouse plants. I have found from various experiments that in a great measure the want of success in growing heaths, for the most part arises from insufficient circulation of air, or from not keeping the soil in the pots in a medium state of moisture; the roots being apt to perish if kept for a short time too moist; and if allowed to get dry, the young fibrous roots will share the same fate, more particularly if the pots are exposed to the rays of the sun.

CLERICUS.

ARTICLE V.

ON THE CULTURE OF THE CHRYSANTHEMUM INDICUM.

BY MR. FREESTONK, WATLINGTON HALL, DOWNHAM.

If you think the following remarks on the cultivation of the Chrysanthemum worthy of a place in your Floricultural Cabinet, they are at your service. In the middle of April take the best rooted suckers that can be obtained, and plant them two feet apart in a

good rich light soil, as they advance in growth they will require a stake to tie them to, to prevent them from being broken down by the wind. If any suckers appear, let them be removed, as the *Chrysanthemum* shows itself to the greatest advantage when grown with a single stem, and that stem filled with flowering shoots from the bottom upwards.

In the second or third week in June, nip off the tops of the plants, which will cause them to throw out lateral shoots. In a month or five weeks after the plants have been stopped, take them up with as much soil adhering to their roots as possible, put them into pots of about eight inches over, using soil composed of sandy loam and well rotted manure, or leaf mould in equal quantities. Place them in the shade, and at such distance one from another, so that they may not be drawn up weak, and let the plants be well supplied with water. In a month from the time of their first potting, they will require shifting into pots of from ten to twelve inches over.

As the plants will now be getting large, they will require a good supply of water, frequently twice a day, and in hot weather, to be syringed two or three times a week. Should any mildew appear, dust a little sulphur over them, which will soon cause it to disappear. In a month from this shifting, some of the larger growing sorts will require to be shifted into pots of from 14 to 16 inches over. At this time the plants are removed from the north to a south aspect, where, if the weather is hot and dry, they are frequently syringed two or three times a day. Towards the end of September, I remove them into a vinery, and if the weather is cold, and the flower buds not so forward as could be wished, I apply fire during the night sufficient to keep the house from 55 to 60 degrees, giving air at all favourable opportunities, and closing the house early in the afternoon, sprinkling the plants and house all over with water, which causes the plants to grow luxuriantly. I place them as far apart as circumstances will admit, taking care not to crowd them, and they never fail to reward with a good show of large flowers from November to January.

As soon as the flower-buds are forward enough to distinguish the best, the inferior buds are removed, leaving from one to three on each shoot.

As the plants come into bloom, they are removed into the conservatory. It is generally supposed that the *Chrysanthemum*

will not bear forcing; I find them bear all the heat, combined with moisture, that you like to give them, and that too without drawing them, provided the flower buds are visible before you begin to force them. In fact it is impossible to get some of the late sorts to expand their bloom in such a season as the last, without using a high temperature.

R. FREESTONE.

ARTICLE VI.

ON CHINESE GARDENS.

(Continued from page 61.)

Air is likewise employed with great success, on different occasions; so as to form artificial and complicated echoes; some repeating the motion of the feet, some the rustling of garments, and others the human voice, in many different tones; all which are calculated to embarrass, to surprise, or to terrify the passenger in his progress.

All sorts of optical deceptions are also made use of: such as paintings on prepared surfaces, contrived to vary the representations as often as the spectator changes place: exhibiting at one view groupes of men, in another combats of animals, in a third, rocks, cascades, trees and mountains; in a fourth, temples and colonades; with a variety of other pleasing subjects. They likewise contrive pavements and incrustations for the walls of their apartments, of Mosaic work, composed of many pieces of marble, thrown together without order or design, which, when seen from certain points of view, unite in forming lively and exact representations of men, animals, buildings or landscapes; and they frequently have pieces of architecture, even whole prospects in perspective, which are formed by introducing temples, bridges, vessels and other fixed objects, lessened as they are more removed from the points of view, by giving greyish tints to the distant parts of the composition; and by planting there trees of a fainter colour, and smaller growth, than those that stand on the foreground, thus rendering considerable in appearance, what in reality is but trifling.

The Chinese artists employ in these enchanted scenes the *vendzhang*, (a native of Siam, it bears flowers of an agreeable smell, which, when they open, are of divers colours, as red, yellow, white and black; the fruit, when it comes to maturity, has the

exact resemblance of a wild duck) the ever living poplar the pau-lu, (a tree very common in Bengal, and some parts of China, to which the large Indian bats have a particular attachment, in so much, that during day-light, they almost cover its branches hanging upon them in clusters, like fruit,) with all kinds of sensitive and other extraordinary trees, plants and flowers. They keep in them a surprising variety of monstrous birds, reptiles, and animals, which they import from distant countries, or obtain by crossing the breeds. These are tamed by art, and guarded by enormous dogs of Tibet, monstrous dwarfs, and African giants in the habits of eastern magicians.

They likewise have amongst the plantations, in which are collected all the extraordinary productions of the animal, vegetable, and mineral kingdoms; as well as paintings, sculptures, medals, antiquities, and ingenious inventions of the mechanic arts; which are a fresh source of entertainment, when the weather is bad, or when the heat is too intense to admit of being in the open air.

The communications to the different scenes and other parts of the Chinese Gardens, are by walks, roads, bridleways, navigable rivers, lakes and canals; in all which, their artists introduce as much variety as possible, not only in the forms and dimensions, but also in their decoration; avoiding, nevertheless, all the absurdities, with which our ancient European style of Gardening abounds.

"I am not ignorant," said one of their artists, "that your European planters, thinking nature scanty in her arrangements, or being perhaps disgusted with the familiarity and commonness of natural objects, introduce artificial forms into their plantations, and cut their trees in the shape of pyramids, flower pots, fishes, and birds. I have heard of colonades, and whole palaces formed by plants, cut as precisely, as if they had been of stone; and of huntsmen, horses, dogs, boars and tigers, in full speed, made of yew and holly. But this is purchasing variety at the expence of reason; such extravagancies ought never to be tolerated, excepting in enchanted scenes, and there but very seldom, for they must be as destitute of beauty, as they are of propriety, and if the planter be a traveller, and a man of observation, he can want no such helps to variety, as he will recollect a thousand beautiful effects along the common roads of the countries through which he has passed, that may be introduced with much better success."

The roads, walks, and avenues, are either directed in a single

straight line, twisted in a crooked one, or carried zig-zag by several straight lines, altering their course at certain points. They observe, that there are few objects more strikingly great than a spacious road planted on each side with lofty trees, and stretching in a direct line beyond the reach of the eye, and that there are few things more variously entertaining, than a winding one, which opening gradually to the sight, discovers at every step a new arrangement; and although in itself, it has not the power of raising violent emotions, yet, by bringing the passenger suddenly or unexpectedly to great and uncommon things, it occasions strong impressions of surprize and astonishment, which are more forcibly felt, as being more opposite to the tranquil pleasure enjoyed in the confined parts of the road; and, in small compositions, they find crooked directions, exceedingly useful to the planter, who, by winding his walks, may give an idea of great extent, notwithstanding the narrowness of his limits.

They say, that roads which are composed of repeated straight lines, altering their directions at certain points, have all the advantages both of crooked and straight ones, with other properties, peculiar to themselves. The variety and new arrangement of objects, say they, which present themselves at every change of direction, occupy the mind agreeably: their abrupt appearance occasions surprize; which, when the extent is vast, and the repetitions frequent, swells into astonishment and admiration: the incertitude of the mind where these repetitions will end, and its anxiety as the spectator approaches towards the periods, are likewise very strong impressions; preventing that state of languor into which the mind naturally sinks, by dwelling long on the same objects.

The straight directions, particularly the zig-zag, are on account of these effects, well adapted to avenues or high roads, which lead to towns, palaces, bridges, or triumphal arches, to castles or prisons for the reception of criminals, to mausoleums; and all other works of which the intent is to inspire horror, veneration or astonishment. To humbler objects, the waving line is a more proper approach, the smallness of their parts rendering them unfit for a distant inspection; and as they are trifling in themselves, they please most when their appearance is unexpected; and from the very point, whence all their little beauties are seen in the highest lustre.

In disposing the walks of their gardens, the Chinese Artists

are very attentive to lead them successively to all the principal buildings, fine prospects, and other interesting parts of the composition; that the passenger may be conducted insensibly, as it were by accident, and without turning back, or seeming to go out of the way, to every object deserving notice.

Both their straight and winding walks are in some places kept at a considerable distance from each other, and separated by close planted thickets, to hide all exterior objects, as well as to keep the passenger in suspense with regard to the extent, as to excite those gloomy sensations which naturally steal upon the mind, in wandering through the intricacies of a solitary forest. In other places the walks approach each other, and the thickets growing gradually less deep, and more thinly planted, the ear is struck with the voices of those who are in the adjacent walks, and the eye amused with a confused sight of their persons, between the stems and foliage of the trees; insensibly again the plantations spread and darken, the objects disappear, and the voices die in confused murmurs; when unexpectedly the walks are turned into the same open spaces, and the different companies are agreeably surprised to meet, where they may view each other and satisfy their curiosity without impediment.

The Chinese gardeners very seldom finish any of their walks *en cul de sac*, carefully avoiding all unpleasant disappointments; but if at any time the nature of the situation obliges them to it, they always terminate at some interesting object, which lessens the disappointment, and takes off the idea of a childish conceit.

Neither do they ever carry a walk round the extremities of a piece of ground, and leave the middle entirely open, as it is too often done amongst us; for though it might render the first glance striking and noble, they think the pleasure would be of short duration; and that the spectator would be but moderately entertained, by walking several miles, with the same objects continually obtruding upon his sight. If the ground they have to work upon be small, and they choose to exhibit a grand scene, either from the principal habitation, or any other capital point, they do indeed leave a great part of the space open; but still care is taken to have a good depth of thicket, which frequently breaks considerably in upon the open space, and hides many parts of it from the spectator's eye.

(To be continued.)

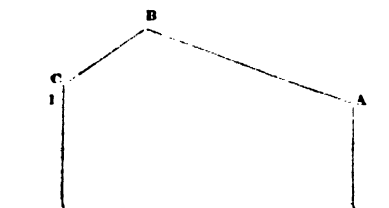
PART II.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON A GREENHOUSE, &c.—I have so frequently derived advantage from the queries and remarks in the 'Floricultural Cabinet,' that I am induced to think that an answer to the following questions may be useful to many of your readers.

I am in want of a greenhouse; the situation I intend for it is on a south border, 18 feet wide, having a good wall, and a gravel walk in front, the length must vary with the expence of the building. It seems to me a great advantage for the plants, and it also adds to the beauty of the house to have



one light behind, the ridge of the roof being at B, in the annexed sketch, the stage should be of the same form as the house, if there is a stage at all. A frequent plan now is to have a raised pit in the middle of the house, but I think it cannot show nearly so many plants as a stage. There should be a walk all round, and it is a question

whether there should be two or three steps to the back part, as the plants might thus be brought nearer to the glass. As to heating, have any of your correspondents tried Dr. Arnott's stove, and with what success? Dr. Arnott seems to think that it is well adapted for Horticultural buildings, it has the advantage of producing a steady heat at a very trifling expence, but my fear is, that it would create too dry an atmosphere for the plants. The hot-water system seems to have superseded the old flue, and I should like to know what it would cost, and how the pipes might be best arranged for such a house as that which I am describing?

My primary object is flowers, not conservatory plants so much as geraniums. My gardener assures me that I may have some vines trained to the rafters, and pruned on the spur method, without much injury to the flowers, I have seen them so trained at Welbeck, with two bunches of grapes at each joint, they look very tempting, but what do your correspondents say to the effect upon flowers? If there are vines, what sort should they be? and should there not be the means of taking them out of the house in winter? and what plan of construction do you recommend for this purpose? As to the roof, I have made up my mind on two points, first that it should be of wood, as every one who has metal complains of its cracking the glass so much; secondly, that the wood should all be steeped according to Kyan's patent, of which, from experience I have a very high opinion, and which I think can be no where of more use than in horticultural buildings, from the great exposure to the weather.

As to glass there seems a great difference in price, according to the size of the pane, I have glazed a large pit with panes five inches by three, it looks exceedingly neat, and is strong, besides, this size avoids duty, but I do not know whether it would look well for a house of considerable size.

I shall be glad if in this letter I have afforded any information, and shall be much obliged to you or any of your correspondents, if (taking these re-

marks along with you,) you will tell me how to lay out £100 to the best advantage, describing the construction of the building, size of the rafters, mode of heating, an estimate, &c., &c.

P. S. According to my plan there would be two sashes in the roof, one in front, and one behind which would be a fixture. Should there not be ventilators in the back wall at D?

A COUNTRY SUBSCRIBER.

ON INK SUITED FOR WRITING WITH UPON METALLIC LABELS.—I am anxious to learn through the medium of the 'Cabinet,' from which I derive much useful information, how the Metallic Labels advertized about a year ago in the 'Cabinet' are written upon, and if they require any particular kind of ink? I have used a common kind of ink, and find the writing easily obliterated with water.

Feb. 27th, 1839.

Y. M.

(A prepared ink is to be obtained very cheap with the labels, and may be applied by means of a pen, or a small camel's hair coloring brush.—COND.)

ON BLOOMING BRUNSVIGIAS, &c.—Having a few healthy bulbs of *Brunsvigia Josephinia*, and *B. falcata*, &c., and not being able to bloom them to my satisfaction, I should feel obliged if some reader of the 'Cabinet' who is successful in flowering the tribe of plants, would give me in an early Number the particulars of the mode of treatment pursued. An attention to this request will also benefit some of my friends, who have equally failed with *Brunsvigias*.

Hamburgh, November 27th, 1838.

G. G.

MALVA FULLERIANA.—Having been informed that *Malva Fulleriana* is a greenhouse plant, you would oblige me by informing me whether it is as you state, a hardy shrub, or a greenhouse plant, and the soil and best method of cultivating it.

N. B. It is in Vol iv. page 264.

February 4th, 1839.

A. X. Z.

ANSWER.

ON DESTROYING ANTS.—Not having been lately so constant a reader of your very useful publication as I could wish, I have not observed whether any satisfactory answer has been given to a query concerning the destruction of ants, by Q. in your number for June last.

If your correspondent has not yet found any remedy, I should recommend him to try what I have seen used with perfect success in the south of Europe, which is garlic chopped small, and laid across the ants usual track. They dislike this so much that it will completely drive them away, and the effect will last long after the smell has ceased to be at all perceptible. This though it will not destroy them, (which I imagine might be done by pouring boiling water into their nests,) will prevent the annoyance which Q. complains of in his conservatory.

Jan. 23rd, 1839.

L. C.

REMARKS.

TO DESTROY ANTS.—Having read complaints against ants, I am induced to send you the following:—Some time ago, a drawer, in which I kept some sugar, was so much infested with ants, that we were obliged to remove the sugar from it. It happened from some cause or other, a small piece of camphor was laid in the drawer, and on opening it a few days afterwards, we were agreeably surprised to find the bottom literally covered with dead ants. This induced us to try the experiment, and from that time we have kept the

sugar free from their depredations without any difficulty, by allowing a small piece of camphor to be in one corner of the drawer. Where trees upon walls, or plants are infested, I should recommend small pieces of camphor to be thrown on the ground round their stems and in some cases to dissolve a little in alcohol, and sprinkle it over the leaves in a diluted state, with a common syringe.

Chelsea.

JAMES HIRST.

FAIRY RINGS—Fairy Rings are considered by J. M. F. Dovaston, Esq., to originate in electricity. "When a column of electric fluid affects the earth, either ascending or descending, it scorches the ground all round its edges, where there is plenty of oxygen in contact with it; and leaves the centre unscathed, where the oxygen is either expelled or destroyed; so fertilizes the extremity. The consequence is that the first year's grass is destroyed, and the ring appears bare and brown; but the second year, the grass re-springs with highly increased vigour and verdure, together with the fungi, whose seeds are so brought into vegetation, that without this exciting cause might have slept inert for centuries."—Mag. Nat. Hist.

NEW OR RARE PLANTS.

CORREA ROSEA. This pretty flowering hybrid kind, has been raised by Mr. Milner. It has a good deal the appearance of *Correa speciosa*, having a fine green and smooth foliage, void of the rusty brown of the latter-named species. The flowers are of a beautiful delicate rose colour, and have a pretty effect.

The few plants that have been raised have been purchased at five guineas each. Being rather slow in propagation, it will be some length of time before plants can be purchased cheap. It deserves a place in every greenhouse, where, blooming as it does, profusely, would produce an interesting contrast with the *C. Milnerii*, *cordata*, *speciosa*, *pulchella*, &c. The plant blooming nearly all the year, gives it an additional recommendation.

STERENLIA ACERIFOLIA. A pretty flowering greenhouse plant, producing flowers of a dark crimson colour. It is in the collection of Messrs. Rollinson's.

IPOMEA. Unnamed species, having leaves of a *Cordata* form, and produces fine clusters of flowers which are larger than *I. rubro-cœrulea*, and of equally splendid colours. It is in the collection at the Epsom Nursery, and merits a place in every hothouse. We also saw another interesting unnamed species, which produces flowers of a light rose colour.

EPACRIS COPELANDII. Mr. Kynoch, gardener to William Copeland, Esq., Layton, Essex, has been successful in saving seed from *Epacris impressa*, and of raising the fine hybrid kind we now notice. The flowers are very similar in size to *E. impressa*, but are of a brilliant scarlet colour, producing a very fine effect. The plant is of a very free habit in growth, and blooms most profusely; it merits a place in every conservatory or greenhouse. Plants of it will soon be offered to the public. It is propagating now at the Clapton nursery.

LAGUNEA PATTERSONII. A very fine flowered greenhouse plant from New Holland, producing flowers much resembling a fine *Hibiscus*. It merits a place in every greenhouse. We saw the plant at Messrs. Rollinson's, Tooting.

PALEMONIUM PULCHELLUM. A very pretty hardy herbaceous plant, well deserving a place in the flower border. The plant blooms very freely. The flower stems rise about six inches high, producing beautiful pink blossoms, having an interesting appearance.

VERBENA PULCHERRIMA. Mr. Low of the Clapton Nursery, has received this kind during the last summer; we saw it in bloom there. The flowers are of a lilac purple, with a white centre; it is one of the erect growing kinds.

AZALEA GLEDSTANANA. This variety may be said to be twin to *A. Late-rita*, only, producing its very different, but most beautiful white flowers; it is grown at the Tooting Nursery, and to be had at one guinea per plant.

LOELIA ALBIDA. A very interesting addition to our stove orchidea, and sent from Oaxaca to Mr. Bateman of Kynpersly. The plant has the graceful appearance of *L. Autumnalis*, but the flowers are very dissimilar, both in form and colour; in the present species each flower is about two inches across, white, with a bright yellow streak down the middle of the lip, and a few crimson spots at the base; they are also fragrant. It is an additional recommendation that it is of easy culture, and a very free bloomer.

THE GARDENS OF THE ROYAL BOTANIC SOCIETY OF LONDON,

INNER CIRCLE, REGENT'S PARK.

(Continued from page 70.)

In our colonies the foundation of botanical gardens has been an object of government solicitude; nor has private enterprise been neglectful in promoting them in our own country. The two universities, Oxford and Cambridge, have botanical gardens; so also have Birmingham, Liverpool, Sheffield, Manchester, Leeds, Hull, Bury St. Edmunds, and Colchester; and they have been recently established at Cheltenham and Newcastle-upon-Tyne. In Scotland there are gardens at Edinburgh and Glasgow. In Ireland, at Dublin, is one belonging to Trinity College, and the splendid establishment at Glasnevin, of the Dublin Society; there are others at Cork and Belfast.

Having referred to the progress on the continent, and in our provinces, we shall in examining what has been done in the neighbourhood of the metropolis, find that there is sufficient encouragement to induce us to supply the deficiency. At Chelsea is a small garden of three acres, founded in the 17th century, and given in 1721, by Sir Hans Sloane, to the Apothecaries' Company, and devoted by them to the study of medicine, and of which they now contemplate the abandonment, if they can obtain a more suitable locality. Those at Kew have obtained considerable reputation, but are at too great a distance to be available to the great mass of the metropolitan population, while their system of management is far from being adequate to the requisites of a national institution.

That the public mind is prepared to support a botanic garden is evident by the progress of botany in every department. The number of scientific societies and floricultural exhibitions are proofs in themselves of the tendency of popular taste, while a great developement is daily given to the culture of this science in the Zoological and public gardens, and cemeteries. As cultivators of the picturesque beauties of plants we stand in the highest position; and the English style in the decoration of gardens is that which is most prevalent on the continent, and most approved, while we stand in an eminent position with regard to the scientific study of botany by our authors and expeditions of discovery.

With such acknowledged advantages to be derived from the establishment of a botanic garden, and with such a tendency of public taste, it would

appear surprising that such an object should have hitherto been neglected. This deficiency is now, however, to be supplied, and in such a manner as, it is to be hoped, will satisfy every votary of science. Although previous abortive attempts had been made to effect this object, the merit of it rests with several members of the Linnæan Society, whose success confers equal honour on the society by which it was promoted and on their enlightened exertions. On the suggestion of this undertaking, it was immediately supported by many noblemen and gentlemen of every shade of politics, promoters of science, arts, and manufactures, and they concurred in the propriety of requesting the assistance of government. The Inner Circle of the Regent's Park being about to be vacated, they signed a memorial to her Majesty's Commissioners of Woods and Forests, requesting them to appropriate this site for such a laudable object. It confers the highest honour on this Administration, and on the members of her Majesty's government, and is a high proof of their desire to encourage science, that they instantly acquiesced in the propriety of devoting the ground for these purposes to a public society, instead of making it the object of individual speculation. On this concession, a farther application was made for the patronage of Her Majesty and the Duchess of Kent; and, it is needless to say, that it was given with a generosity worthy of the illustrious personages and of the great public object concerned.

The names of the supporters of this society, are a strong guarantee of its proper management, and we are happy to say that their expressed intentions are a good augury of the success of the institution. Its scientific objects are intended to be carried on in a manner commensurate with the dignity of the country, while it devotes an express attention to the encouragement of cultivation, arts, and manufactures. Public utility is the best guarantee of its success, and its promoters may feel assured, that keeping this object in view will always ensure its support. Even if a taste for such an institution did not exist, it is always the effect of well directed efforts to create it; and how far these may be successful, we see in the impulse which is given to mechanical science by the Royal Gallery of Science and the Polytechnic Institution, which are absolutely creations of the last ten years, within which period botanical studies have acquired a still greater impulse.

The society will be constituted similarly to other scientific societies, and will be under the management of a president and council, composed of fellows and members. It will doubtless, be incorporated by Royal Charter, and its importance can hardly fail to obtain for it great influence; while the manner in which it is regarded by the Linnæan Horticultural Medico, and other Botanical Societies, does honor to their enlightened liberality, and to the cause of science.

The site chosen is the inner circle of Regent's Park, lately occupied as Jenkins' nursery ground; its extent exceeds eighteen acres. That its position is eligible is best proved by referring to the neighbouring grounds of the Zoological Society, while its size is fully competent for the purpose intended. Many eminent gardens contain only three acres, while few exceed twenty, and where they do they are employed either in the cultivation of medicinal plants for the hospitals, or in the growth of fruit for the market. Its appropriation will be no encroachment on public enjoyments, while if properly directed, it cannot fail to confer great advantage on the whole empire.

The artistical details of the plan, as shewn in the accompanying drawing, are formed upon an observance of the most enlightened principles, and it has been the endeavour, in this department and in others, to make science and art equally conducive to the improvement of popular taste. This portion of the subject is deserving of particular attention, as it is by what is presented to the public eye that they will be induced to judge of the merits of the remainder. However interesting a mere planted surface might prove to the man of science, something more is requisite to the mere discursive visitant,

and particularly to by far the greater proportion of its supporters, those who seek recreation rather than instruction. In fact, due attention to objects of taste is imperative in an institution that must derive its chief support from the ladies, who are certainly some of the most munificent patrons of this institution.

We are but too apt to depreciate the moral effect of the pleasures of sight, although, it must be averred, most unphilosophically; for if it be allowed generally that that organ produces the most powerful impressions on the mind by its representations, so the influence exerted by it is susceptible of modifications according to the nature of the objects presented to it. If the parks and gardens be the lungs of the metropolis, their functions are but inadequately employed if they supply only pure air, without affording a means of exercise, for the sick man will die in the healthful shades of Montpelier or Madeira as easily as in the densest miasma; but the true means of securing the health of our population is by promoting the moral as well as the physical influence of exercise. The more interesting the garden be made, the more will its moral capabilities be augmented, and the effect of a well arranged establishment cannot fail to be of importance in restoring the tone of mind to the worn out senator, languid beauty, or overworked citizen; for the mind requires its sustenance as well as the body, and there are as few maladies to be cured by abstinence from mental food, as there are for corporeal. Such an effect cannot fail to be accompanied with an appreciation of the scientific advantages, and the attractions of such an institution might be made productive of the happiest results, in creating in the infant mind a taste for scientific pursuits.

(TO BE CONTINUED.)

ON RETARDING THE BLOOMING OF PLANTS.—Among the many improvements made in the cultivation of flowers, the methods invented for retarding their flowering is one. It has been the opinion of many naturalists that the annual development of flowers yields more real satisfaction than if all were ever-flowering; that their disappearance for a season enhances the value of their return. It is long since the method of procuring a late bloom of ranunculus, anemones, and roses has been practised. This was by late planting the tubers of the two former, and double pruning the flowering shoots of the latter. Double pruning is performed in autumn and again in April. With regard to rose trees yielding flowers naturally at different seasons of the year, if the pruning is attended to, a garden may never be destitute of roses.

But there are other shrubs beside the rose-trees of which the flowering season may be protracted, both the *Laurustinus* and *Althea frutex* may be so managed as to produce their flowers at unusual seasons. The first, instead of flowering in the very early spring, may be, by removal, made to flower in autumn; the latter, by the same means may have their flowering postponed till that season.

FLORICULTURAL CALENDAR FOR APRIL.

PLANT STOVE.—Still support the requisite degree of heat by fires at night, as the plants will now begin to show their blossoms, which should be encouraged as much as possible at this season. Fresh air, when the weather is favorable, is very necessary, and should always be admitted when required; this will greatly assist their flowering, and cause the new shoots to be strong and healthy. This month is the most proper time to pot such plants as may require it, taking great care to use such compost as is congenial to them, and use plenty of drainage. Any that do not require shifting into larger pots may have the surface soil renewed with fresh compost, which will greatly invigorate them, and also add to their neatness. The same directions respecting watering and cleanliness may be observed, as given last month. Still propagate all kinds of exotics by means of seeds, layers, cuttings, or

suckers, according to the nature of the different kinds; insert them in pots and plunge them in hot-beds, which will promote their vegetation and rooting quickly and certainly.

GREENHOUSE.—These plants will now require large admissions of air at all times when the weather is mild, for as most of them will now be shooting freely, they must not be kept too close. The plants must now be looked over to see when water is wanted, and let all the plants be properly supplied therewith, as this is now a very necessary article, particularly when they are in the house; be careful of the succulent kinds. Let no decayed leaves or shoots be allowed to remain, but let such be taken off as soon as perceived; and all shoots that are of a weak straggling growth must be pruned more or less as appears necessary; let no weed, moss, or litter, be seen on the tops of the pots and tubs, and if any foulness be contracted on the plants, let it be instantly removed. In arch shrubby exotics of any particular kinds; sow seed in pots, placing them in a hot-bed; sow seeds of orange, lemon, &c. for stocks; also propagate by cuttings, layers or otherwise, and if placed in a bark bed in the pine stove or hot bed, they will be greatly facilitated in their rooting.

HERBACEOUS PERENNIALS, should now be divided and replanted; also biennials, as Sweet-williams, &c., should be planted for blooming this season.

CUTTINGS.—If old plants of Salvias, Fuchsias, Petunias, Scarlet Geraniums, Verbenas, Heliotropes, &c., &c. were saved through winter, and young plants be required for turning out into open beds in the flower garden, &c., young shoots should now be taken off close to their origin upon the old wood and struck in moist heat.

ANNUALS.—Hardy kinds should be sown in the borders, &c. (See Vol. I. p. 43 of the Cabinet, where particular directions are given.) Tender kinds should have plenty of air admitted to them, whether sown in pots or upon a slight hot-bed. (See Vol. I. page 42, of the Cabinet.) In order to have the plants of some particular kinds stiff and healthy, they should be planted off into small pots, boxes, or the open border, or slight hot-bed, &c., so as to be fine plants for final planting in May. Many kinds of tender annuals intended to ornament the greenhouse or stove through summer, will require potting off, or if done before this month, probably repotted into larger pots.

AURICULAS—will bloom this month; they will require protection from wet and mid-day sun. The plants will require a free supply of water; if manure water be occasionally given, it will improve the size of the flowers; care should be taken not to apply it over the plant. When the trusses of flowers are formed, if there are more flowers upon each than can conveniently expand, the small and centre ones should be cut out, so as to leave about six.

CAMPANULA PYRAMIDALIS.—Offsets or cuttings should now be taken off and be treated as directed in Vol. I. p. 48.

CARNATIONS.—If not planted off last month, should now be done. (See Vol. I. p. 23.)

DAHLIAS.—Seedling plants should be potted off, one plant into a small or sixty-sized pot. Shoots and cuttings of old roots should be taken off where it is desired to increase the kind, and strike them in moist heat.

CHINA ROSE.—Plants of the tender kinds, as yellow, sweet scented, &c., should now be placed in heat, in order to cause a production of shoots for striking, so as to increase the kinds when desired. (See Vol. I. p. 48.)

CHINA ROSE (hardy kinds).—It is now the proper time to bud the varieties of China Roses, do it as soon as the bark will freely rise.

TRIVERANIA COCCINEA.—Roots of this plant should now be potted. (See Vol. I. p. 177 and 223; articles on the culture, &c., are there given.)

PELARGONIUMS.—Cuttings now struck will produce plants to bloom at the end of summer. (See Vol. I. p. 88.)

PANSIES.—Plants will now be pushing shoots that will be emitting roots. Where it is wished to increase the kinds, it is a very suitable time for doing it, by taking off shoots and planting them in a good rich soil, shading them for a few days at first.

POLYANTHUSES.—(See Vol. I. p. 23 and 132.)

TIGRIDIA PAVONIA.—The bulbs should now be planted in the open bed; choose a warm and sheltered situation.

ERICAS, (Heaths.)—Cuttings of many of the greenhouse kinds should now be put off. (See Vol. I. p. 48.)

MIGNIONETTE.—To bloom from June should now be sown.

ROSE TREES.—When it is desired to have Roses late in the season, let them be pruned this month. (See article in Vol. I. p's. 23 and 206.)

SELF SOWN ANNUALS—which have stood the winter should be thinned, and where desirable some may be successfully transplanted.

REFERENCE TO PLATE.

ELY'S DR. HORNER PICOTTEE.—This very superior flower we gave in the number for March, and by an oversight of our Printer the remarks upon it were omitted till too late for that number, we however now state that this unrivalled and noble flower was raised by Mr. Ely, the celebrated carnation grower, of Rothwell Haigh, near Leeds. It was sent out by him last year, in a limited number, at 7s. 6d. per pair, (its present price,) and has been the wonder and admiration of all who have seen it. Its peculiar excellence consists in its extraordinary size, its bold broad well rounded petal of remarkably strong fleshy substance, which causes the flower to remain an unwanted time in bloom; the ground colour is a pure brilliant white, free from specks or stains; the edging is of the richest purple, clear, distinct, and free from all tendency to striping; the flower is high and well crowned, and filled in the centre with its fine imbricating petals. It is altogether infinitely superior to every other picottee in cultivation, and must be in all valuable collections.

This flower is named in honor of Dr. Horner, an esteemed and talented physician, at Hull, who has greatly favored the promotion of horticultural pursuits. (We understand Mr. Ely has now an abundant stock of it.)

HOVEA MANGLESII.—Captain Mangles's Hovea; all the species of Hovea are very handsome greenhouse shrubs, and the accessions which we have received to them through the hands of Captain Mangles, are highly valuable. The present species is not so striking as some other kinds, yet, it is very pretty and interesting. It thrives well with the treatment usually given to the rest of the species, that is, to pot them in sandy peat, as free from fibres as possible, taking care to put plenty of drainage, and always avoiding over shifting; water must at all times be given with careful judgment, especially during winter.

PHILIBERTIA GRANDIFLORA, large flowered Philibertia.—A very pretty plant for ornamenting the trellis or rafters of a greenhouse, growing rapidly and blooming very freely. It requires to be grown in a soil composed of fresh loam and leaf mould, with efficient drainage. We have propagated it from cuttings planted in sand, and placed in a hot-bed, we have a stock of plants for sale.

PHARBITIS DIVERSIFOLIA, three lobed large Convolvulus.—A very ornamental and showy half hardy annual, and was introduced from Mexico by G. Dickson, Esq. It is a very beautiful flowering plant most suitable for training up stakes, fancy wire frames, fencing, verandas, &c., it grows freely and blooms profusely. The flower has somewhat the appearance of the Convolvulus major, but is rather less; the plaits on the corolla are very strikingly distinct. It deserves a place in every flower garden, or for ornamenting a greenhouse or conservatory during summer.



Stemodia

Chelidonium scutellarioides

Crochium



Pharbitis diversifolia

Pharbitis grandiflora

Nicotiana glauca

THE FLORICULTURAL CABINET,

MAY, 1st, 1839.

PART I.

ORIGINAL COMMUNICATIONS.

ARTICLE I.

OBSERVATIONS MADE ON THE EFFECTS OF SITUATION AND EXPOSURE ON DIFFERENT KINDS OF PLANTS, DURING THE SEVERE WINTERS OF 1837-8.

BY CLERICUS.

As by far the greater number of plants cultivated in this country are exotics, we find they are variously affected by the changeable weather of our climate, as well as by the attending circumstances of the situations they are destined to occupy. Our knowledge, acquired by experience, of the constitution of foreign plants, has supplied us with rules for our guidance in the distribution of them. If we happen to be acquainted with the native habitat of a plant, we can judge pretty accurately what place it is most likely to thrive in with us. Tropical plants, for instance, we place in the stove, or conservatory; Australian, South African, Chinese, and South European, in the greenhouse; and those from the northern parts of Asia, Europe, and America, any where in the open air where we may have occasion for them, or which we may think best adapted for them. This is a very natural way of proceeding; but we are not always right in its application; some tropical plants are killed by placing and keeping them in the stove; because it is not so much the latitude whence they have been brought, as it is the elevation of their habitat above the

level of the sea which determines their hardiness. Many plants are debilitated by confinement in the greenhouse, and very many extra-tropical plants are lost from being placed in what is considered the warmest or most sheltered situation.

These errors are occasioned either by a want of experience respecting the constitution of the plant, or from inattention to the extreme change of temperature to which it is exposed in its new place, or from ignorance that situation and exposure change the constitution of plants to such a degree that, while one is perfectly hardy if nursed on a northern aspect, another of the same kind shall be so tender and vulnerable on a southern exposure, that it dies, or is cut down to the ground, under the slightest frost.

Want of experience concerning the constitution of a newly imported plant may be said to be an excusable want of judgement; because we have no means of knowing without experience, there being no general rule to guide. If, indeed, we are told that it is an annual from a warm country, we may safely conclude that it will succeed in this climate during summer, as many tropical annuals do. Or, if it be a perennial herb from the same country, we may find it answer with us if it be only protected from frost. But if tropical shrubs or trees are brought to us, we cannot, from any external mark, judge whether they are liable to be killed by frost or not. If they shed their leaves in winter, it is only a sign that they are winter-resting plants, not that they are hardy; because there are several tropical plants which are deciduous, as for instance, the silk cotton tree (*Bombax ceiba*); and many evergreens are as hardy as those that shed their leaves.

We often fail in preserving tender plants from inattention to local circumstances. We are liable to mistake shelter for warmth. Frost and the north and east winds are most dreaded in this country. A southern exposure, whether for the abode of animals, or a station for vegetables, is always considered the most eligible, merely, perhaps, because it is the most agreeable to our own perceptions. But in respect of vegetables we often err in this matter, both in choosing sheltered situations and southern exposures.

Cold (or rather cold air) is always most intense in humid situations, because there is the most copious evaporation. Such situations, in this country, are either on the tops of clayey hills, or in the lowest valleys, where there is either a lake, river, or brook.

These low grounds are nearer the main springs, and often abound with them, whence exhalations are ever rising, though imperceptible ; of course such a valley must always be more chilly, and more subject to keen frost than any drier or more elevated situations. Such glens, provided they are open to the south, are chosen as the most suitable for tender exotics, merely because they are more sheltered from the northern blast. In the summer indeed, such a locality is most favourable to the quick and strong growth of every plant. The air, being generally calm and moist, conduces to vigorous expansion ; and the very coolness of a summer's day or night, as felt in such places, is most propitious to luxuriant vegetation. These circumstances, however, instead of being beneficial to tender exotics, have a directly contrary effect ; the summer excitement only renders them less able to bear the frosts, which fall upon them with redoubled intensity in winter. And instead of the slow and sturdy growth which would have happened to a plant on a dry and breezy hill, or on a northern aspect, we have an enfeebled nursling, unfit to bear the rigours of our climate from sheer mismanagement.

Many proofs of the truth of these statements may be adduced, but we presume they are unnecessary, as the facts must have been repeatedly observed by our readers in general. The fact, however, is most important, not altogether for the sake of naturalising exotic plants, but for fixing the sites for gardens and orchards, which, if misplaced at first, give cause ever after for regret.

Not only do the exhalations from a moist valley generate cold, but the cold air which descends upon the hills after sunset is said to "slide down" and settle in the lowest place. So firmly is this believed, and acted on by a well-known horticultural philosopher, John Williams, Esq., of Pitmaston, near Worcester, that in all cases where a garden is made on ground sloping to the south, that gentleman invariably advises the lowest boundary to be a hedge ; or if a wall, it be raised on grated arches high enough to allow the escape of the cold fleece of air accumulated within the garden. On the same principle, whatever may be the aspect, the upper boundary wall should be high and close, to intercept the descending current and divert it round the ends.

From these circumstances, then, it is fair to conclude that low situations should never be chosen for garden sites, or as the best places for tender exotics.

There is another circumstance not yet adverted to which operates injuriously on tender plants in sunny and sheltered valleys. There, they are sooner affected by the returning warmth and solar beams of spring, and hurried into a premature growth long before frosts are over, or the summer temperature confirmed. They are awake and putting forth their tender leaves and shoots before the exposed residents of the hill are in the least acted on. The first have their sap liquefied and in motion; that of the second is clammy and at rest; the first suffer because they have to sustain four degrees of frost perhaps, when least prepared for it, while the second have only to bear two degrees, and are otherwise fortified against it.

The native plants of the frosty regions of Siberia suffer greatly from late frosts when introduced into British gardens, not from the severity of our seasons compared with that of their own, but entirely from the changeableness of the former. In Siberia the winter sets in at once, and the surface of the ground is soon covered with snow; every vegetable becomes instantly torpid, and in this state remains in perfect safety till the return of spring, or rather summer, as there is scarcely any spring season in that northern clime,—no intermission of mildness to excite, and frosts to destroy the tender plants, as is so often experienced in this country.

The changeableness of our spring weather is, in fact, the greatest bar to our possessing very many plants, which, to have at all must be guarded in some kind of building erected for the purpose. Our want of success in attempting to naturalise some exotics shrubs and trees, however, may have happened not so much from the constitutional delicacy of the plants themselves, as to the injudicious manner, perhaps in which the trial has been made. Exposed situations on the north side of a hill, and on poor and dry, rather than on rich and moist soil, is certainly the most eligible station for making a trial of the constitution of a foreign plant. Here it would not be excited into too early growth by the early sun of the day or of the season, nor would the aspect induce precocious growth. Its growth would be slower but its shoots would be firmer in texture and consequently better able to resist the destructive effects of frozen sap.

I cannot conclude these observations without first alluding to the ideas entertained about the acclimatation of exotic plants. The notion is founded on the supposition that, as animals have a

tendency to accomodate themselves to foreign climates, or to the changes of temperature of their own native place, so plants may in like manner be susceptible of physical changes which would enable them to bear great diversity of climatal temperature; but from all experience on this point it appears, from many tropical annuals long cultivated in Britain, that they have not perceptibly advanced in hardihood since the first day of their introduction. Such are the runner kidney-bean (which, by the bye, is a perennial); the potato and cucumber among culinary vegetables; the China aster and balsam among flowers, and the melon among fruits. All these have been perpetuated by seeds that have been produced, ever since their first introduction into this country, but without gaining any additional protective habit against frost. We may, therefore, conclude that plants generally have been formed for the climates to which they are indigenous, and have not that mutability of structure or of sap which would render them invulnerable to frost in a colder country, or to the incessant excitement of a warmer one without deterioration.

That many plants are now seen in the open air which were formerly in the greenhouse, or even in the stove is well known; but this has not happened in consequence of any change in the constitution of those plants, but merely from being misplaced on their first introduction for want of experience:—*Aucuba Japonica*, one of our hardiest shrubs, was once under my care in the warmest end of a conservatory!

The effect of frost on tender vegetable bodies is mitigated by thawing it off with water before the sun shines upon them. This seems to contradict what has been before stated, as to dryness being a safeguard to plants. But the cases are different; perfect dryness is a security against frost, but when plants are loaded with frozen dew, and this allowed to be dissolved by the sun, a much more intense degree of cold is generated during the solution of the icy particles by the sun, than if they were suddenly dissolved by water. It is this increased degree of cold which ruptures the delicate vessels of the plants, and of course destroys them.

Sometimes we see the stem of a tender shrub, as a heath, for instance, rent into many pieces, whilst the youngest shoots remain unharmed. This is owing to the rigidity of the first, and the elastic texture of the second; the latter yields to the distending effects of the concealed sap, and afterwards returns to a healthy

state ; but the unyielding character of the old wood only renders it more destructable, The foliage of the grasses indigenous to cold countries is only withered by frost, but seldom destroyed, owing to the tenacity and elasticity of its structure.

CLERICUS.

ARTICLE II.

ON THE CULTURE OF THE STOVE SPECIES OF CACTUS.

BY MR. RICHARD BEALY, BLACKBURN.

ALL the stove species of Cactæ may be treated as follows with great success.

Pot them in loam peat, or sandy loam, mixed with a small portion of lime rubbish, say about a fourth part.

Always let the pots in which they are planted be as small as the plants will allow ; large pots are injurious, because the roots are prevented from reaching the sides for a long time, and the body of the soil is liable to retain too much moisture every time the plant is watered.

Always give a good drainage, by laying in each pot a good portion of broken potsherds, as the least stagnation is always injurious, sometimes fatal ; therefore, never allow water to stand in the pans or feeders, in which the pots are sometimes placed.

Water very seldom, not more than twice a week, when they are flowering, and not so often at other times ; give very little at a time, not more than will just moisten the soil all over, particularly if the weather is not fine and sunny.

About the middle of June, turn them out of doors into a situation where they will not be exposed to wind, but perfectly open to the rays of the mid-day sun. Place them on a board or floor of any kind, to prevent the worms from effecting an entrance through the bottom of the pots. This system of exposing them in summer, gives them a check which seldom fails to produce a good bloom.

Whilst out of doors they must not be allowed to receive the heavy dashing rains, or they will suffer, perhaps die in consequence ; either a boarded roof, or other shelter must be provided for them on such occasions. Also, if the pots stand on a floor of slates or flag stones, they should be plunged in a little moss,

as the sun, by heating the pots, sometimes burn the roots of the plants.

In September, take the plants into the greenhouse, and place them in a situation where they will receive plenty of light and air in winter.

Early in the spring, remove them into the stove in succession as they are wanted to flower.

Most of the species will flower very fine without being placed out of doors at all ; but by placing them out as above, the flowers will be much finer and more abundant than when grown regularly in the house ; they may be increased by cuttings, seeds, and grafting.

Take off the cuttings at the length required, and lay them on a shelf in the greenhouse, &c. to dry up the wound made by the knife. Let them remain on the shelf till they begin to have a shrivelled appearance, say a week or a fortnight, then pot them in small pots in the same compost as recommended for old plants, set them on a shelf as near the glass as convenient, and be particularly cautious not to over-water them.

Sow the seed in a wet state, immediately after being gathered from the plant, and rubbed out of the husk. For this purpose, fill a pot with a mixture of equal parts of peat, earth and sand, cover it lightly, and plunge the pots into a hotbed, if the seed be good, it will make its appearance a month afterwards.

The operation of grafting is very simple, merely requiring an incision to be made, and fitting in it a fresh cutting of another kind, rubbing a little clay over the wound to keep out the air.

ARTICLE III.

ON THE CULTURE OF EPACRIS'S,

BY A FOREMAN OF A LONDON NURSERY.

ALL the species of *Epacris* are natives in the neighbourhood of New South Wales, and are very handsome shrubby greenhouse plants. Their culture is very simple and easy ; the *E. microphylla*, and *exserta*, require to be potted in equal parts of sandy loam and peat, but all the rest thrive best in alone. They nearly all come in flower about the end of 1 or the beginning of April, and continue blooming until June or

July, although the present subject flowers most of the winter, as well as spring and summer. In June they must be turned out of doors with the other greenhouse plants, but previous to which, it will be necessary to pot them, in most cases shifting them into larger pots; this is indispensable, as their roots are so fine a texture, that if the pots be placed out of doors, and consequently exposed to the alternations of heat and cold more than when in the house, the roots against the sides of the pots will receive material injury, the plants will become brown, and in most cases die; this we have seen in very many instances.

The best way of propagating them is by cuttings, which should be put in early in the spring; they will strike if put in at other times of the year, but not so freely. Take off the extreme ends about one inch or an inch and an half long, and plant them in pots of sand, cover them with bell glasses, and give them similar treatment to *Erica* cuttings. When they have struck root, pot them into small pots in a frame where there is a little heat; and when they have again begun to grow, remove them into a warm part of the greenhouse, and then treat them in the same way as the old plants. The whole of the order *Epacridæ*, consisting of eighteen genera, all being natives of the same country, require the same general mode of culture, which may be stated as follows:—

With the exception of *Epacris microphylla* and *exserta*, *Styphelia longifolia*, the whole genera of *Lysinema*, *Poncletia*, and *Leucopogon*, let every species be potted in sandy peat soil.

The above exceptions must always have an addition of sandy loam mixed with the peat in which they are potted, but in every other respect it must be treated like other species.

Good drainage in every case must be attended to, for any deficiency here will seriously injure if not totally destroy the plants.

Never sift the soil in which the plants are potted, but chop and break it well, although in some cases this is scarcely necessary, when the turfy parts are well rotted.

Never allow the soil to become hard and dry particularly amongst those species potted in sandy peat alone; because, from the delicacy of the fibres of the roots, this cannot be the case without the plants being materially damaged, if not destroyed.

Always pot the plants immediately before they are turned out of doors in summer; for if this be not done, the action of the sun

and air upon the sides of the pot, if the roots are matted, will dry the roots, and the plants will become sickly and die.

In potting, never cut off the matted roots with a knife, but merely pull them with the fingers without damaging the ball more than is necessary.

Always let the plants stand in an airy part of the greenhouse, and never crowd them among other plants, or they will not prosper.

In propagating, select half-ripened wood for cutting, plant them in sand, cover them with a bell-glass, and place them in a shady part of the greenhouse, or in a frame. In both situations they must be shaded from the sun, until they have struck root.

ARTICLE IV.

ON THE GREEN MOSS ON ROSE TREES, AND OTHER SHRUBBY PLANTS.

BY A PRACTICAL GARDENER.

MANY readers of the Cabinet must have observed in their walks through a shrubbery, the unsightly appearance of the stems and trunks of rose bushes and larger shrubs, being entirely destitute of bark. Is it a natural disease incident to old trees? I am inclined to think that this is not the case, for I have seen comparatively young trees, covered as much as the old ones. It will be observed that trees on rocks, on walls, on soil, and in fact, on every thing that is exposed to the action of the atmosphere in a fixed state, a green covering, which, when minutely examined, appear like a green powder, and if allowed to remain, would form into patches of moss. This seems to be the most minute of the vegetable creation, and I believe the very foundation of it, and but for the industry of man, this would be the clothing that Nature would assume in this moist climate. The particles of this green powder must be exceedingly minute, as it remains invisible until great masses are collected together. Now it is obvious where this adheres to a tree, it must close up its pores, and thereby prevent the vessels from being acted upon by the external air. I likewise think it receives nourishment by exhausting the sap in the bark, which will first begin to crack, and afterwards die and fall off. I am the more induced to form this opinion, by

having seen an experiment tried to destroy it : this was done by using the common solution of soft soap and sulphur-vivum mixed with boiling lime-water, till it became of the consistence of paint. This, when cold, was applied with a paint brush to part off the branches of a young tree that were covered with this green mould yet the bark was free from cracks. The bark of the part thus dressed became in a short time clear, and entirely free, whilst the remainder of the tree was still clothed with its green garb. I would recommend all gardeners, who have trees or shrubs in this condition, to give them a dressing once or twice in the winter season, and I doubt not that it will answer their highest expectations. A sprinkling of quick lime in a powdered state over the affected parts, after a shower of rain or strong dew, I have found to be equally useful wherever it touched.

ARTICLE V.

ON THE CULTURE OF IXIA AND GLADIOLI.

BY MR. RUTGER.

FEELING dissatisfied with what I had seen of the flowering of these bulbs, in the nurseries round London, as well as with those under my own care, I resolved to try the effect of a different soil from that generally recommended, and not cramming so many of them together in a pot as is usually done. The soil used was one-half rich loam, with one-fourth rotten dung, and one-fourth leaf-mould, both well decomposed and mixed up together with the loam. The pots were well drained, and a layer of the siftings of the dung and leaf-mould was put over the drainings. Of the smaller sorts of bulbs, I put only two or three in a forty-eight sized pot; of the larger only one in a pot of the same size; and of the largest only one in a thirty-two sized pot. During their growth; and particularly when near flowering, the bulbs were liberally supplied with water. Under this mode of treatment, my desires were fully realized, and my bulbs produced fine flowers, far superior to any others that I have ever seen grown in pots.

J. RUTGER.

ARTICLE VI.

ON CHINESE GARDENS.

(Continued from page 88.)

THESE projections produce variety, by altering the apparent figure of the open space from every point of view; and by constantly hiding parts of it, they create a mystery, which excites the traveller's curiosity; they likewise occasion, in many places, a great depth in the thicket, which affords opportunities of making recesses for buildings, seats, and other objects, as well as for bold windings of the principal walks, and for several smaller paths to branch off from the principal ones; all which take off the idea of a boundary, and furnish amusement to the passenger in his course; and as it is not easy to pursue all the turns of the different lateral paths, there is still something left to desire, and a field for the imagination to work upon.

In their crooked walks, they carefully avoid all sudden or unnatural windings, particularly the regular serpentine curves, of which our English gardeners are so fond; observing, that these eternal, uniform, undulating lines, are, of all things, the most unnatural, the most affected, and most tiresome to pursue. Having nature in view, they seldom turn their walks, without some apparent excuse; either to avoid impediments, naturally existing, or raised by art, to improve the scenery. A mountain, a precipice, a deep valley, a marsh, a piece of rugged ground, a building, or some old venerable plant, afford a striking reason for turning aside, and if a river, the sea, a wide extended lake, or a terrace commanding rich prospects, present themselves, they hold it judicious to follow them in all their windings; so to protract the enjoyments which these noble objects procure: but on a plain, either open, or formed into groves and thickets, where no impediments oblige, nor no curiosity invites to follow a winding path, they think it very absurd; saying that the road must either have been made by art, or be worn by the constant passage of travellers: in either of which cases, it cannot be supposed that men would go by a crooked line, where they could arrive by a straight one. In general, they are very sparing of their twists, which are always easy, and so managed, that never more than one curve is perceptible at the same time.

They likewise take care to avoid an exact parallelism in these

walks, both with regard to the trees which border them, and the ground of which they are composed. The usual width given to the walk, is from eight to twenty, or even thirty feet, according to the extent of the plantation ; but the trees, on each side, are, in many places, more distant ; large spaces being left open, which are covered with grass and wild flowers, or with fern, broom, briars, and underwood.

The ground of the walk is either of turf or gravel ; neither of them finishing exactly at its edges, but running some way into the thickets, groves or shrubberies, on each side, in order to imitate nature more closely ; and to take off that disagreeable formality and stiffness, which a contrary practice occasions in our European plantations.

In their straight roads or walks, when the extent is vast, the Chinese artists observe an exact order and symmetry ; saying that in stupendous works, the appearance of art is by no means disgusting, that it conveys to posterity instances of the grandeur of their ancestors ; and gives birth to many sublime and pleasing reflections. The imperial roads are astonishing works of this nature, they are composed of triple avenues, adorned with four rows of enormous trees ; generally Indian chesnuts, spruce firs, mountain cedars, and others of the largest growth, planted at proper distances ; and extending in straight lines, and almost on a level, two three, even four hundred miles. The centre avenues are from one hundred and fifty, to two hundred feet wide ; and the lateral ones, are generally from forty to fifty feet ; the spreading branches of the trees forming over them a natural umbrella, under which the travellers pass, at all times of the day, unmolested by the sun.

In some places these roads are carried by lofty vaulted passages, through the rocks and mountains ; in others, upon causeways and bridges, over lakes, torrents, and arms of the sea ; and in others, they are supported, between the precipices, upon chains of iron, or upon pillars, and many tire of arcades, over villages, pagodas, and cities : in short, no difficulty has been attended to in their construction ; but every obstacle has been conquered with amazing industry, and at an almost incredible expence.

(To be continued.)

REVIEW.

The Boquet, or Ladies' Flower Garden, being a Description of those plants which will flower in the Room, and the Treatment most suitable for them.—By a Florist, Simpkin & Co. 12mo. pp. 102. *

In the preface the author states his object in the following remarks:

"It has been often a matter of great surprise to me that amongst all the various books that have been written upon Botany, and the cultivation of plants, none should ever have been written upon the treatment plants require when placed in a London sitting-room. I have, therefore, taken upon myself a task of this kind, in hopes that, when it has been perused, it will be the means of preserving many plants, and also of keeping that healthy and beautiful appearance upon them, which can only be done by proper treatment.

"It was my intention at first to have placed all those plants that require the same treatment together, and so to have made one description answer for each head or section; but this I found would be impracticable, as almost every two or three plants would require to be placed under a different head, and would consequently cause great confusion in the arrangement of them.

"I have, therefore, made a selection of the most approved flowers, for the various months of the year, and so given a description of each plant individually."

It appears that the author has in the title given, limited a Lady's Flower Garden, to a dwelling room, this is certainly too contracted. The fine collection of plants in the conservatory and greenhouse, as also their well kept flower gardens, and beds in the open air, give sufficient evidence.

The remarks on the plants included in the work, will be found somewhat useful, but will admit of considerable additions to render it what is desirable. In another edition we hope this will be attended to. The following is a specimen of the work:

"**FEBRUARY. Rose.** This may justly be classed as the most beautiful flower that nature has given us, having that which is rarely met with in other plants, beauty and a fine perfume combined together. There are several varieties of this lovely flower, which can be procured at this early season, and which are forced in hothouses with very great heat, so that when taken into the room, they require very great attention. In purchasing forced roses, one of the principal objects to have in view is the healthiness of the plant, which may be easily told by the leaf being

very smooth and expanded, and of a fine green. The beauty of the rose, depends a great deal upon the form of its flower when open, which in forced roses is often very bad; therefore it should be particularly noticed if the bud is of an oval form, and not to care for a great profusion of flowers, as they are sure not all of them to open their bloom, whereas, when they are but few, they generally all expand, making large and handsome flowers; but when the bud is short and flat, and being indented on the side, it will be perceived that one half of the bud opens before the other, and consequently spoils the beauty of the flower. The above brief description will be found equally applicable to all roses, whether forced or not.

"Having given a few remarks upon the choosing of the rose, I think I may now safely venture to describe the treatment that is most suited to it after it is removed from the hothouse and brought into the room; therefore the first point is, to find the situation which it is likely to thrive best in, which ought to be where there is plenty of light, and at the same time not much affected by the fire; consequently, that part of the room which is farthest from the fire, and nearest the light or window, is best suited to it: if there is a saucer placed beneath the plant, as is frequently the case for convenience, water should at no time be allowed to remain in it, as nothing is more detrimental to this plant than stale water; although there are several varieties of plants which are very much benefitted by standing in water; hence it is that the want of sufficient knowledge of those which ought and ought not to be treated in this manner, has occasioned so many failures among plants when taken into the room; but as I treat of the various plants, I shall describe those that are benefitted by this mode of treatment.

"The rose should be slightly watered once a day at this season of the year, and that upon the surface of the mould, not putting any in the saucer, and so long as it remains wet, then the plant will require no water; but when it becomes dry, then a fresh supply may with safety be given. The forced rose is one of those plants very much subjected to a small green fly, which fixes itself beneath the leaf and upon the bud, and it is a great object even with nurserymen to destroy them, which is partially done by means of tobacco smoke; but I think where there are only a few plants, the best and most certain way of keeping them from the plants, is to wash the leaves and bud with a feather or soft hair brush, dipped in a solution of soft soap and tobacco water, as the soft soap being of an adhesive nature, it remains upon the plants for some time, keeping with it the properties of the tobacco; this being carefully applied once, it is rarely the insects return again during the time it is flowering: this method will be equally applicable to all plants which are subject to this species of insect.

"The following are the names of a few roses, which may be had at this early time of the year: Provin's Rose, Moss ditto,

Spong's ditto, Rose de Meaux, and Fairy Rose. The Rose de Meaux and Spong's Rose, are the two best for flowering in the room; but the two former species are much the finest, the flowers being nearly three times the size of the latter. The Fairy Rose, as it is called by the gardeners, is quite a different rose from that which has generally borne that name. It being a very double flower, and much larger than the variety of Fairy Rose, the treatment of this beautiful little plant is not near so troublesome as other roses, nor is it so liable to insects. It should receive a very little water each day, and when the roses fall off, the flower-stalk should be cut off, which gives much more strength to the succeeding bloom. About this time the common Blush China or monthly Rose, commences to flower, and, with proper care, continues blooming for many months; it is also liable to insects, but may be easily cured of them by the means already described. Its other treatment is much the same as the Fairy Rose, cutting off the dead flower and giving it more water as the season advances; when about the month of April, it may be placed outside of the window during the day, and very often the night also.

"*Rhodora Cadanensis*,—This is one of those plants which flower before it makes any appearance of leaf, for which it generally makes up in abundance and showiness of its bloom, being of a rosy lilac colour, and flowering in small bunches on the extremity of the branches. It is very beautiful in bouquets, for which purpose it is very much cultivated by gardeners. It will either stand in a cold room, or one where there is a fire, and should be very slightly watered each day.

"The *Pink* is nearly one of the worst plants for forcing early, as it is so often that nearly the whole of the buds turn blind, and never open, especially when taken into the room; consequently it requires an accurate knowledge of the habit of this plant to be able to choose those which are likely to bloom. The method which I have always found the most certain, and which I recommend to my readers, is by slightly pressing the bud between the fingers. When they feel full and hard, they may safely be depended upon, for when the petals of the bloom are fully formed, they are sure to open well. But should the buds close between the fingers, and appear to be empty, then there is no chance whatever of its flowering, not even in the hothouse of the nurseryman himself; and again, they ought not to be chosen very backward, even if they should feel full and hard, for when very backward, they require twice the care and attention, and at the same time do not flower any the finer for it, consequently I should recommend choosing those which have the most buds about to open, as they last as long as the most backward. In its treatment care should be given to the watering of it, as a surplus of water will destroy the forthcoming bloom sooner than anything else; so that if there is a saucer beneath the plant, water should not be allowed to remain in it longer than two or three hours after it has

been watered, which ought to have been done every day, if the plant is in good health, and placed near the light, where it will not be exposed to a cold draught of air, which is very injurious to it. There are few flowers that deserve to be more cultivated, either at this or any other time of the year, on account of its very fine scent, that is surpassed by hardly any other flower. Those most held in esteem for forcing early—Shailer's Early White, Moss's Blush, and the Anne Boleyn Pink. The latter is quite different from the other pinks, both in its growth and flower, generally attaining the height of two and three feet, and having a very large flower, which is very sweet: it is much later in its flowering than the two former, and thrives better than any other when taken into the room.

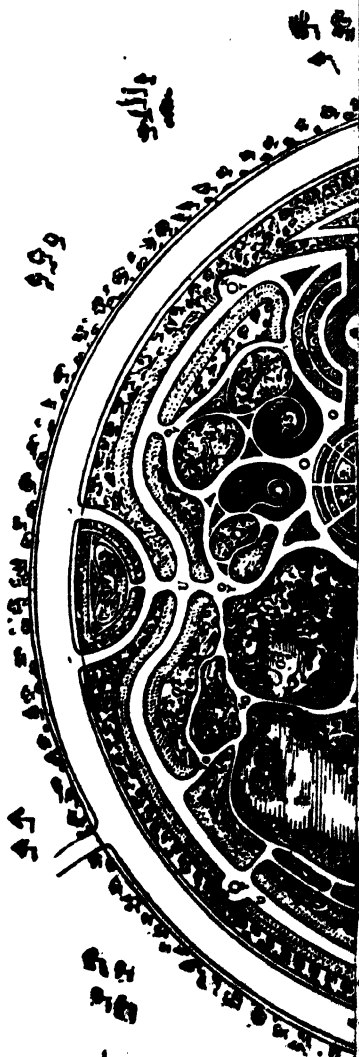
“*Azalea indica alba*.—The beautiful species of this tribe seem formed to relieve the dullness of the winter months both, by their various colours and by the beautiful scent of the flowers. The species I am now describing generally blooms with two or three flowers together, of a clear white, with long stamens which project out of the flower; it is particularly desirable for the town, as it is one of those plants which retains its bloom for a long time, and likewise flourishes very well in the room; the flower of this species of *Azalea* is extremely liable to be bruised from its delicateness, and should therefore be kept from any draught of air; it should be watered once a day, and never be permitted to get quite dry, for when the flowers once droop from this cause, it is rarely that they rise again. *Azalea indica phanicea*:—This differs from the other variety, as having a much greener and better leaf, and the flower of a very dark lilac or purple; generally it does not flower very freely until it gets to a large size; its treatment is the same as the other. *Azalea indica Smithii*:—This species is very showy, and flowers very abundantly, as well upon small plants as large, having a bright red flower; it flowers much later in the season than the former varieties, as it is not generally much forced.

“*Camellia*.—This beautiful tribe of plants has been more trouble to make bloom, in town, than perhaps almost any other; I shall, therefore, be more particular in describing the treatment, and point out many objections, that have hitherto been to the culture of this desirable plant. From its repeated failures, it is often thought that it is a plant that will not flower in town: but this is quite erroneous, as with proper attention, it may be flowered as well as most other plants; and being of a fine leaf, independent of flower, it is particularly worthy of a little more trouble than ordinary plants. Now the great cause of complaint against it, is, that when it is covered with bud, and every expectation raised of seeing some beautiful flowers spring from them, they gradually commence falling off as the season of its blooming approaches, so that there is scarcely a single bud left upon the plant at that time when they ought to be expanding themselves into flower.

(To be Continued)

THE GARDENS OF THE ROYAL BOTANIC SOCIETY,

INNER CIRCLE, REGENT'S PARK.



G.—Mediterranean Garden, with extensive range of Conservatories, Stoves and Hot-houses.

H.—Dutch Garden.

Q.—Arboretum and Shrubberies.

R.—Lawns.

S.—Mound, with Observatory.

b.—Road to Colosseum, &c.

c.—Road over the bridge to Marylebone Church, &c.

THE GARDENS
OF THE
ROYAL BOTANIC SOCIETY OF LONDON,
INNER CIRCLE, REGENT'S PARK.

(Continued from page 94.)

The arrangement of this portion of the objects of the society has been confided to an architect possessing considerable taste and judgment in laying out ornamental grounds; and it is needless to say that he has complied with the utmost expectations of the enlightened promoters of the society. The geographical and physical distribution of plants is to be preserved as much as possible, and a necessary accessory is the application of national architecture in the buildings devoted to the production of individual countries. Other artistical decorations, as statues and vases, will also be employed as far as possible; and it is saying much in praise of the objects of the society, that only in this department, without going into any unnecessary expence, they may powerfully contribute to the cultivation of public taste. While the several ornamental edifices will present a synopsis of the various styles of architecture, a proper selection of statues and vases, would afford all the benefit of a gallery or museum. This would give the public an opportunity of becoming acquainted with the best production of the several schools, and the elucidation of this object should be by no means omitted in the catalogue of the gardens. The selections might include casts of the several styles of Egyptian art, and of the finest ancient and modern specimens of the several Greek, Italian, French, and English schools. Whether these are classed in the general catalogue, or formed into a separate volume, the descriptions should contain sufficient information of the works and their artists, and the base of every figure should have inscribed the name of the artist, and date and style of the work.

The plants are to be arranged according to the two great systems of classification, the artificial and the natural; and will likewise be disposed in such a manner as may be useful to every class of botanist. The artificial system, is that of Linnaeus, founded on the visible organs of plants, while it presents great facilities of reference, is too loose for any strict classification, and resembles the old method of animal arrangement, which in its division of quadrupeds included in the same class of animals, reptiles, and excluded cetaceæ. The natural system formed, by Jessieu, is founded upon the constitutional differences of plants, and establishes as clear a distinction between the several classes, as in animal tribes the distinction between warm and cold blooded. The adoption of this latter system is of almost universal preference in all continental gardens founded upon improved principles, and is well calculated, by its introduction here, to impress the student with the importance of studying the organic constitution of plants.

The circle is proposed to be distributed into compartments, for the reception of the several plants indigenous to Europe, Asia, Africa, America, Australia, and the Polar Regions. These again are proposed to be subdivided into gardens, in illustration of the style of ornamental gardens of the several countries of the great divisions.

At the entrance of the grounds from the grand drive leading from the Colosseum a building will be erected, devoted to the general business of the Society, and containing a library, museum, and rooms for study. The library will consist of botanical works and periodicals, and to it will be annexed a reading room for the use of fellows and members. The museum will contain dried specimens, drawings, and engravings of recent plants, and specimens of fossils, and it would augment the value of these latter if they were accompanied by such recent plants as are identical to them, or have the nearest relation. It will further contain illustrations of the application of vegetable

productions to manufactures, as, for instance, specimens of cotton from the raw material up to its formation into cloth. The rooms for instruction will afford facilities for students to draw plants from the living objects, and it will include a convenient lecture hall, in which courses will be given similar to those which are so popular at the *Jardin des Plantes* at Paris, and the Royal Dublin Society's gardens at Glasnevin. From this edifice a raised viaduct promenade, over-looking a considerable portion of the gardens, will lead to a domed conservatory in the centre of the gardens. This conservatory will be on a very large scale, so as to emulate some of the foreign houses, and to give every facility for the growth of the more magnificent tropical plants. Descending from the conservatory to the right of the grand promenade, we come to a garden laid out in the Dutch style, with a fountain in centre, and canals. Beyond this will be a rosary, consisting of a circular lawn, surrounded by arch trellis work and borders, for the growth of every variety of this queen of flowers. From this we enter the Italian garden, laid out with statues, fountains, and raised terraces, at one end of which will be a conservatory and at the other a casino. Having passed under the promenade, we reach the medico-botanical garden, adjoining the central conservatory, and surrounded by hot-houses, stoves, &c. We are now at the head of the lake, which will extend for about a quarter of a mile, interspersed with islands and winding amid varied scenery. Here will be cultivated aquatic plants, and there will also be provided a salt-water basin for marine algæ. At the head of the lake will be an artificial rock for the cultivation of rock-plants, and which will contain a large reservoir to supply the several fountains and hydraulic works. The borders of the lake, will, if possible, be so arranged as to display representations of natural geological sections, which may be made equally productive of interest and delight.

Between the lake and central conservatory will be an extensive lawn, upon which ornamental shrubs and parterres of flowers will be displayed in the modern English style. In its special department will be a garden devoted, like that at Glasgow, to the cultivation of plants used in manufactures; and the dyer may here see the material of his tints, or the weaver the cotton from which his cloth is spun. In proper situations will be the American or bog-earth grounds; a ground shaded by trees and containing stumps and roots of trees, tunnels and caves for the growth of mosses, ferns, fungi, and other cellulæares. Around the whole ground is to be a walk with wide borders for the arrangement of plants in scientific order. By the sides of the walks raised receptacles may be placed, so as to bring some of the more delicate bog earth plants nearer the eye.

An experimental garden may be rendered an important and interesting object, whether devoted to agriculture or manufactures. Professor Daubeny has devoted a portion of the limited space of the garden at Oxford to a series of experiments on the powers of agricultural plants, by which he endeavours to ascertain how long a plant will continue in constant cultivation before it exhausts the soil, and when one plant has exhausted the soil, what other will grow in its place. The rotation of crops, the subject of this examination, is one of the most important principles of modern agriculture, and one which greatly demands enlightened study.

By these several departments every facility will be given for the study of botany to whatever class of student may be desirous of availing himself of it; and one of the most important objects, the application of botanical productions to arts and manufactures, is particularly provided for. As far as means will permit, exertions will be made to promote the cultivation of such plants as may be most useful for these purposes, and to extend them in our own country and our colonies; and even if the society should do nothing locally, they have it in their power to further these objects, by giving prizes, as is done by the Society of Arts. To give every inducement for its local study, public botanical exhibitions will be opened periodically, in which an important feature will be introduced, by giving prizes for any new application of plants to manufactures, and for the best delineation of them, or

combination in a pattern. It is gratifying to perceive that it is the intention of the society to act like the institutions at Paris and St. Petersburg, as a central establishment, to form a union with provincial societies, and to afford every assistance to them and to individuals in the propagation of new plants.

The most effective way to render the gardens of advantage to the public is to devote great attention to everything that can promote its utility, and the simpler and more effective all its arrangements are made the more it will effect this end. A very important object is the placing the names of the plants near them in a conspicuous position, and such description should contain their scientific and common names, their country, and what are their economical uses. The catalogue should be as extensive and cheap as possible, and contain, in addition to the history of the plant and its particular uses, a chemical analysis of its several constituents; to this work should be prefixed a short explanation of botanical terms and the rudiments of the systems. Another necessary feature should be always, as far as possible, to accompany the description and the catalogue, by analysis of the several soils in which the plants are placed, as this would call public attention to a department of science which is highly important, and in which, notwithstanding the efforts of Kirwan and Davy, we are still greatly deficient.

Having thus exhibited the general features of this plan, it is hardly necessary to augur its success, as that cannot fail to attend an object of such great interest and utility. We have sufficient evidence in the taste for floriculture, and the increasing cultivation of zoological and botanical science, that the public mind is sufficiently prepared for such an institution, and is perfectly capable of appreciating and supporting it; and if we wanted an instance of popular discrimination on this subject, we have a most admirable instance in the case at Dublin. The gardens of the Royal Dublin Society having been much neglected, gradually declined in public estimation; but in 1834, no sooner was an improved system adopted, than the lectures were crowded, and the number of visitors increased, in four years, from 7,000 to 20,000. That no improvement is lost on the public mind, we see again in the effect produced by the new regulations in the national collections in London, where every change for the better has produced a corresponding increase in the number of visitants.

In conclusion, the managers have but to follow in the course they have commenced, and the success of their institution will reflect equal lustre on themselves and advantage on their country, and redeem the honour of the giant metropolis from the deficiency of such an important embellishment. Its promoters may rest assured that it is only by enlightened management that these objects are to be obtained, while through it the enjoyments of their fellow countrymen may be promoted, and the greatest advantages conferred on the arts, sciences, commerce, and manufactures of their native land.

New Plants.

STACHYS COCCINEA. This plant is a native of Mexico, and bloomed at the Clapton Nursery with the *Salvia Patens*, &c. The plant grows about half a yard high, having numerous branches, flowering freely. The flowers are of a dull red; but though not brilliant, when grown in masses produce a pretty effect. It blooms in the open border from June to October.

CHOROZEMA ELEGANS. This new and beautiful species has recently bloomed in the greenhouse in the London Horticultural Societies Garden. The flowers are of a brilliant yellow and crimson, produced in large spikes. It is a very desirable plant for the greenhouse.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

DENDROBIUM CRUMENATUM,

(Bot. Reg. 22.

ORCHIDÆ. GYNANDRIA MONANDRIA.

1. Discovered in various parts of the Indian Archipelago, and was sent from Ceylon by Mr. Nightingale, to his Grace the Duke of Northumberland, in whose Collection at Syon it has bloomed. The flowers are produced numerously on a terminal raceme. Each blossom is about an inch across, white stained with yellow. It is stated, that it varies with white and pink flowers.

DENDROBIUM AUREUM var. PALLIDUM. Golden flowered.

(Bot. Reg. 20.

ORCHIDÆ. GYNANDRIA MONANDRIA.

2. This plant is a native of Ceylon, and has bloomed in the collection of Messrs. Loddiges's. Each flower is about two inches across, yellow and white, powerfully fragrant.

New and Rare Plants noticed in the London, and neighbouring Nurseries.

HOVEA PUNGENS.—This new species was introduced into this country by Baron Hugel of Vienna, and has recently bloomed in the greenhouse at the Tooting Nursery. The leaves are very narrow and long, giving the plant a very pretty appearance. The flowers are of a purplish blue colour, and produce a pleasing effect. It is a desirable plant for the greenhouse.

CALOYNE BARBATA.—This new and interesting orchideous plant, sent from the East Indies to Messrs. Loddiges's, and has recently bloomed in their collection. The flowers are produced on racemes. The sepals and petals are white. The labellum is white streaked, and stained with bright yellow, and at the base is tinged with pink.

PIMELEA INCANA.—is now in bloom at the Clapton Nursery. It is well known that the Pimeleas in collections produce their flowers in corymbose heads at the summit of the branches, and the plants usually become naked as they advance in size, but the present species, though ten feet high, is covered with branches, leaves and flowers, down to its very base.

The flowers are white, produced on terminal pendant clusters, and produce a most charming effect.

GARDOQUIA BETONICOIDES.—We saw this new species in bloom at the Clapton Nursery, at the same time as the *Salvia patens*. It is a herbaceous plant, blooming profusely in the open border in summer. It contrasts with *Salvias*, &c. it produces a pretty effect when in masses. It is a native of Mexico. The flowers are about the size of the pretty, and now well-known species, *G. multiflora*, of a bright rosy purple colour.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES

ON DR. ARNOTT'S STOVE.—H. W. requests Mr. Harrison to inform him in the next number of the Floricultural Cabinet, whether Dr. Arnott's Stove will heat a greenhouse properly, and which is the best house in London for buying one?

We have not had an opportunity of seeing Dr. Arnott's Stove in operation to a plant house, but having been supplied by correspondents with the following remarks upon the subject, we give them for the information of our correspondent:

Having recently built a new greenhouse, and feeling unwilling to incur the expense of fixing a hot-water apparatus, yet anxious to spare the great expenditure of fuel, occasioned by brick flues, my attention was turned to Arnott's stove as a medium. Accordingly, in last December, I procured from Cottam and Hallen, one of their 18-inch stoves, which is now, and has been since then, in constant operation. My new house is 60 feet long, by 12 feet wide, with a span roof; the stove is placed at one end, within a few feet of the door. To explain why I had it placed at the end, rather than in the centre, let me here say that, feeling rather sceptical as to its efficacy in engendering sufficient heat, I had built at the other extremity of the house a common brick flue, 20 feet in length in case of exigency. I will now give the result at my observations.

During the frost of the 8th and 9th instant, with the assistance of one hour's heating of the flue in the evening with brushwood, the thermometer was kept up to 50 degrees, and, of course, the frost completely excluded. Still wishing to ascertain with greater exactitude the capabilities of Arnott's stove, I have had, during a very sharp wind frost, nearly 30 feet of the house next the stove partitioned off by mats, so as to give me a small greenhouse, 30 feet long, 12 feet wide, and 10 feet high. In this house, then, has the stove given all day, with a moderate fire, and the consumption of not quite a peck of coke, from 50 to 60 degrees of heat. To take off the arid and rather harsh nature of this heat, I have had a zinc pan of water 2 inches deep, and 18 inches square, placed on the stove; the evaporation of which gives all the softness and moisture that can be wished for.

It must be borne in mind, that in this trial 9 feet of the glass roof out of 15 feet have been covered with double mats, as is usual in severe frosts with all greenhouses. At this moment, 8 p. m., the thermometer in the open air, is at 28 degrees. In the house of the before mentioned dimensions, heated by Arnott's 18-inch stove, it is at 60 degrees.

I hope I have now said enough to convince plant-growers, that for small greenhouses, or even for moderate sized ones, this stove will effectually keep out frost, which, of course, with greenhouses, is all that is required. For plant amateurs, particularly for those who do not keep a regular gardener, is invaluable; for the little attendance required can be given by a maid-servant. No overheating can take place, and no danger to buildings is incurred; and if the simple prevention is taken, of sprinkling the inside of the stove, when it is cold, with water, to lay the dust, preparatory to cleaning it, not the least particle of dust escapes. This is a great advantage, as all other stoves give so much dust, as totally to unfit them for plant-houses. To nurserymen and dealers in greenhouse plants, this stove is indeed a boon, for what numbers of lovers of greenhouse plants have been deterred from

undertaking their cultivation, owing to the daily and nightly care required during frost, to keep brick flues regularly heated; and sometimes, owing to the great expense of fuel, and the calculation that the frost would not be severe, a fire has not been lighted some nights at the end of winter, and then all the previous care has been destroyed by the admission of frost to the plants. Now, with Arnott's stoves, any pit or large frame may be made frost-proof; and, as the consumption of fuel is so trifling, a fire may be lighted every night, and the expense not felt. Some caution is certainly required in purchasing these stoves. I bought two of an inferior construction, and found them both useless. Fortunately, Messrs. Cottam and Hallen had supplied a neighbour with one of the regular construction to heat his servant's hall, a room of large dimensions. This acted so admirably, that I immediately procured one from them; the effects of which I thought it my duty to give you, to register in your legitimate pages.

SAWRINGEWORTH.

T. RIVERS,

As there is at present an anxious desire amongst the public to know what Dr. Arnott's stoves are capable of performing, as regards heat, and as I have six in use, and have paid great attention to the working of them, you may be glad to hear the results. But I now allude more particularly to obtaining a bottom heat from them for early forcing. I have just erected a pit 20 by 7, and formed an air chamber under the whole length; on the top I have placed netting works, supported by wood rafters, (iron would be better, but this was by way of experiment); on that I have laid turf with the grass downwards, and on that again I have placed dry mould. At one end is the Arnott stove, the smoke of which is conveyed through the whole length of the air chamber by a small brick flue, four inches in diameter, and comes out at the other extremity of the pit. The result is, that I have as beautiful a bottom heat throughout as can possibly be required. How the plants—melons I intend it for this spring, and pines afterwards—will grow in it, remains to be proved; but I have no doubt whatever about them in my own mind. I have also three tubes at equal distances, communicating with the air chamber beneath which I can open and close at pleasure to let out the hot air when I have too much. They will be further useful for pouring in water, to prevent the heat from drying up the mould, which it might be apt to do, unless some means of that sort were resorted to. I give you this early notice of it in the hope of inducing others to make a similar experiment, as the season is but just commencing, and, by the end of it, we may have some practical men giving us their opinions upon it. The advantages that are derived from it are numerous; all fermenting materials, which are always expensive for large pits, will be saved; the trouble and all the filth and dirt of renewing linings will be done away with. The expense of the fire cannot exceed twopence in the twenty-four hours, and a stove to answer every purpose may be got for £2. The six I have in use consume just one hundred weight of culm in a day and night, which costs here tenpence halfpenny per hundred weight. One is placed in a pine pit, another in a hothouse applied to a boiler, and the others are in different rooms in the house. The average expense of the whole together is not twopence per day and night each.

You will see by this account, that a great deal may be done with them at a very small cost, and that many of the annoyances attending forcing, may be entirely overcome by the use of them.

GARD. GAZETTE.

ANSWER. *

ON INK SUITED FOR WRITING ON METALLIC LABELS.—In answer to your correspondent Y. M's inquiry in last month's Cabinet, "On Ink suited for writing with upon Metallic Labels;" I beg to inform him that from experience I find in order to be perfectly secure, and to preserve the complete indentification of my plants, that it is absolutely necessary to use the pre-

pared Ink which has been advertised with the prepared Labels. I have used unprepared Zinc Labels with, and without the prepared Ink, but I have found myself frequently disappointed by the complete obliteration of the names, which has proved very inconvenient to me, particularly in the naming of my Dahlias. Since my adoption (which has been for some years) of the use of the prepared Ink with the prepared Labels I have not met with a disappointment.

A CONSTANT READER.

REMARKS.

THE HORTICULTURAL SOCIETY'S GARDEN.—We recently called at the before mentioned garden, and were not less surprised than delighted, when shown the foundation part of which was then completed, being the commencement of an erection which will give credit to that wealthy and Honourable Society. In the February number of the 'Botanical Register,' Dr. Lindley thus speaks of it, "all who are interested in the cultivation of exotic plants, will be glad to learn the Horticultural Society of London, are about to erect a most extensive conservatory in their garden at Chiswick. The range will be nearly 500 feet long, running east and west, with a front both to the north and south. The roof will be constructed entirely of iron, glazed with patent sheet glass, and will have the form of a gothic arch. The west wing rather more than 180 feet long, and 27 feet high, has been contracted for by Messrs. D. & E. Bailey, of Holborn, and will probably be completed by the middle of May. The whole range when executed, will be one of the most extensive in the world." The Doctor proceeds to observe, "It is now to be expected that greenhouse and stove plants, especially the former, will become a great object of attention with the Society; the effect of which will doubtless be, to improve the ornamental character of tender plants, in the same degree as that of hardy collections."

ON THE PLANTAIN.—At the meeting of the Royal Horticultural Society on Tuesday evening, Professor Johnson is reported to have made the assertion that the Plantain, (as in the remarkable instance of corn,) "has never been met with in a wild state, but only within the precincts of cultivation," and immediately afterwards, we are carried away from its native land to the extremities of the habitable earth, in search of the uses to which it is applied. The wild Plantain, called by some *Musa sylvatica*, found over the whole range of Ghauts, extending nearly from Surat to Cape Comorin, and in the vicinity of Bombay, is one of the most common of jungle plants; whether this is the true and original *Musa paradisiaca* or not, remains to be proved, I believe it so to be; the difference between the wild and cultivated variety, (if such it may be termed,) being, that the former springs up in June, the commencement of the rains, and dies down at the end of the year, even in spite of irrigation, which is not the case with the latter; and that in the former the whole contents of the fruit consists of seeds nearly as large as a sweet-pea, but of which in the latter scarcely a trace is discernable.

March, 28th, 1839.

CIVES MUNDI.

FLORICULTURAL CALENDAR FOR MAY.

PLANT STOVE.—Very little fire-heat will now be required, only applying it in cold weather. The plants will progressively require an increase of air and water. If any want an increase of pot-room, it should be attended to as early as possible; otherwise, if not watered frequently, the foliage or flowers will be liable to suffer, turn brown, or fall off the plant. Keep the plants free from decayed leaves, moss, &c. Frequently stir the surface of the soil. When any casual irregularities in form occur, prune or tie the shoots as required. It is a good time for propagating by cuttings, suckers, seeds, &c., placing them in moist heat.

TENDER OR STOVE ANNUALS.—When it is desired to have some plants to bloom late in autumn, as Balsams, Cockscombs, Browallia, &c., seeds should now be sown, and the plants potted off into small sized pots, as soon as they are large enough, using a rich soil.

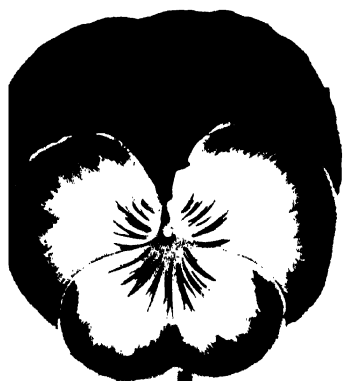
GREENHOUSE.—During the early part of May, a few frosty nights generally occur; in consequence of which, it is advisable not to take out the general stock of plants before the middle of the month, or even in cold situations, before the 25th. Whilst the plants, however, remain in the greenhouse, let them have all the air that can be given, during the day, and at nights if no appearance of frost. Particular attention will now be required to afford an ample supply of water to free growing kinds of plants. Frequently syringe them over the tops at evening, just before sun-set. If any of the plants be attacked with green fly, or any other similar insects, apply a sprinkling of tobacco water, diluted with water, by adding to one quart of the liquid five of water; in applying which to the plants, syringe them at the under as well as upper surface of the leaves: a repetition will rarely be required. This mode of destroying the insects is far preferable to fumigation, no injury being sustained by it, even if applied in a pure state. The liquid can be obtained of tobacconists at 10d. or 1s. per gallon. Inarching Orange or Lemon trees may still be performed. It is a good time for increasing plants by cuttings striking in moist heat. Greenhouse annuals—as Salpiglossias, Globe Amaranthuses, Balsams, &c.—should be encouraged by a little warmth and shifted into larger pots, early in the month; so that the plants may make a show, to succeed the removal of the general collection of greenhouse plants. Cuttings or suckers of Chrysanthemums should now be taken off, if not done before. *Triverania coccinea*, plants should be potted singly into a light rich soil and be forwarded in the stove, and repotted as they advance in growth, not too much at a time, but as root room appears necessary. *Lobelias* for the greenhouse should be similarly treated, as to potting, &c.

FLOWER GARDEN.—Continue to protect beds of Hyacinths, Tulips, &c. Carnations in pots should be encouraged by manure water, &c., in order to grow them vigorously: care in striking them will be required. By the middle of the month, half hardy annuals—as China Asters, Marigolds, &c.—may be planted out in the open borders. Some of the best kinds may be potted, as done to the more tender sorts. Many kinds of greenhouse plants—as Petunias, Salpiglossias, Salvias, Fuchsias, Heliotropes, &c.—should now be planted out in the open border. Dahlias that have been forwarded in pots, frames, &c., may be planted out towards the end of the month. Seedlings may be pricked out, in a warm situation, having a deep, fresh, rich soil. When Stocks, Mignonette, China Asters, &c. are wished to bloom late in the year, seeds may now be sown, either under a frame or on a warm border. Slips of Double Wallflowers should now be put in under a hand-glass. Seeds of biennials—as Sweet Williams, Scabious, Campions, &c.—should now be sown. Tuberoses, for late flowering, should now be planted, either in pots or warm borders. Offsets of *Campanula pyramidalis*, should be planted in rich soil, and placed in the greenhouse. Repotting must be continued till they cease to grow, by this means the plants will reach eight feet high, and be very branching.

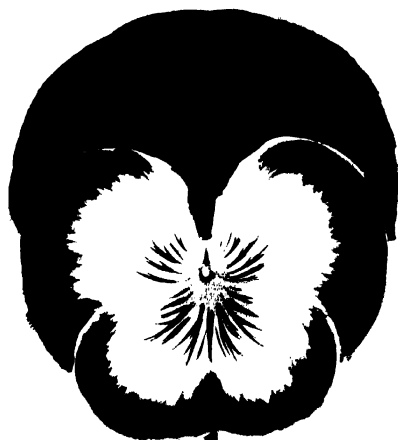
REFERENCE TO PLATE.

ECLIPSE, KING OF HEARTSEASE, AND BEAUTY OF EDMONTON, are among the splendid Seedling Panzies raised by Mr. Page, of Edmonton Nursery, and advertized for sale in previous numbers of the Cabinet.

LORD DURHAM, AND GENERAL WOLFE, are very fine Seedling Panzies raised by Mr. James Harly, Florist, Simpsfield, near Goldstone, Surrey, (see advertising sheet for the present number.) We have drawings of some other very fine Seedling kinds sent us by the above gentlemen, which will appear in some future number.



Piedmont



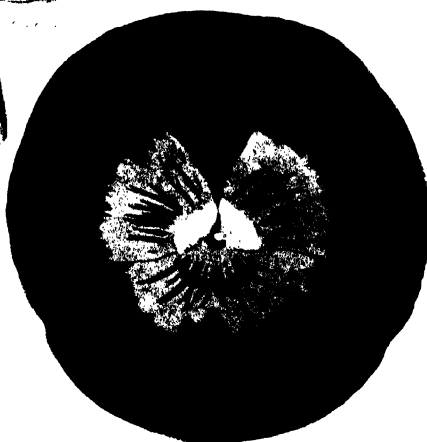
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THE FLORICULTURAL CABINET,

JUNE 1st, 1839.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE PRESENT TASTE AND STYLE OF ORNAMENTAL GARDENING.

BY MR. JOHN FOREST, GARDEN ARCHITECT, &C., ROSS.

As gardening was one of the first, so is it one the most delightful occupations of man; it contributes to his necessities, as well as to his comfort and pleasure. The cultivation of salutary herbs, and grain, and fruit for diet, were necessary to his existence; and that of flowers for their scent and beauty, and of trees for shade and shelter, was equally necessary accompaniments. Hence the calling became divided into distinct branches, namely, kitchen, fruit, flower, and ornamental gardening. The two first, though of most real utility, are considered subordinate to the two last, more especially the last of all, which has been dignified by the title of, "*landscape gardening*." The term has been borrowed from that given to any prospect of a country, but particularly from those works of art depicting wild or ornamental scenery, called landscape paintings, representing any space or region of a country, with its various objects.

The first ornamental gardens of which we have any good account were regular enclosures, with everything they contained arranged most symmetrically, justifying the often-quoted sarcastic couplet of our poet Pope:—

"Grove nods at grove, each alley has a brother,
And one-half the lawn but just reflects the other."

This rectilinear and rectangular style of gardening was, however, quite natural to man in the earlier ages of the world; he saw

nature in all her wildest forms around him, and, as lord of the creation, he felt a kind of instinctive desire to bring her under his controul; he wished a contrast and a disposition of his trees, and boundaries that would mark or secure his possessions, and, at the same time, exhibit his skill as well as his sovereignty. Art was then his idol, not Nature; and everything he did was to show how much the latter was under his dominion.

This artificial style of gardening continued to prevail in every civilised country, from the earliest times till after the beginning of the eighteenth century. Before this epoch, Le Nôtre, a French garden architect and ornamental gardener, was extensively employed in almost every nation in Europe; and some portions of his designs are still to be seen in France, and many imitations of them everywhere, as well in this country as on the Continent.

While Le Nôtre and his contemporaries were driving every trace of nature from their garden scenes, the painter was at the same time enthusiastically engaged in studying her in her wildest forms, and copying every incident in real scenery which would improve his studies or enrich his pictures.

Before the period to which we are alluding, many eminent painters had immortalized their fame by the beautiful landscapes which they had painted. Among the celebrated paintings, it is remarkable that very few trim garden scenes were represented, especially as the artists, both gardeners and painters, were probably admirers of each other. This, however, is only an instance of how much the human mind is liable to be enchained by custom or reigning fashion. The idea had not yet been entertained, perhaps, that the principles of ornamental gardening and landscape painting are the same; for, in practice at that time, the artists took directly contrary routes: the painter studied nature only, while the gardener busied himself in cutting and slashing vegetation into all the most fantastic regular figures his ingenuity could invent. Geometry, with its lines and rules, was his text book; without this he could not trace a line, or prune a tree, or trim a hedge. On the other hand, nature, in all her varied forms, and habits, and hues, were seized and imitated by the painter, tracing her on the mountain steep, or in the secluded dell, by the sparkling river side, or on the banks of the placid lake.

Thus, at one time, were painters and gardeners employed, both occupied in arranging the same objects; the one forming

real, the other pictorial scenery, but with very different views : the first was enamoured of "neglect and accident;" the other seriously annoyed if a single leaf projected from the smooth surface the shears had made.

The love of gardening and of fine pictures, however, keep pace with each other, and were often united in the same cultivated mind ; indeed, we seldom meet a virtuosa who is not equally enamoured of all the fine arts. Both gardeners and painters were employed in the embellishment of regal, noble, ecclesiastical, and manorial residences. While the exterior was graced and adorned by the former, the interior was decorated and enriched by the latter. The painter's landscape at last "bore away the bell;" the admirable scenes presented on canvass were extolled by every unsophisticated eye, and merely because they were more true to nature ; and when compared with the most laboured garden dispositions, the latter sunk in public estimation, and was soon followed by the cry—*Why is not every gardener a painter ?*

This impression was so strong after the new light broke in upon the minds of the *cognoscenti*, that Kent, a painter by profession, was actually induced to become a landscape gardener. His new task was not a pleasant one ; he aimed at producing immediate effect, as he used to do in his studio ; but this was impracticable, as he found he must wait many years before he could possibly see the full effects of his dispositions of trees, shrubs, &c.

The first attempt by Kent was certainly a failure, because, in straining to do on the naked lawn what is so easily done on canvas, he made himself ridiculous, by planting dead trees, and several other freaks, which, however objectionable as the effects of time or accident in real scenery, become quite ludicrous if imitated by art and labour.

But as many places at that period were capable of great improvement by merely clearing away redundant growths, the painter's ideas were in such cases highly valuable, and their assistance was duly acknowledged ; and consequently improvement by abstraction, or simple clearing away, became the rage. Hence a reformation (by far too radical however) took place. Every connoisseur wondered how the contracted ideas of the gardener could have been so long tolerated ; a kind of remorse was felt that the visual enjoyment of real pictures should have been so long withheld ; a sweeping sentence of condemnation was instantly pronounced by the arbiters of fine taste, and open war was

declared against every right line and right angle, and against every perpendicular form of Dutch or Italian gardening.

Soon were the venerable avenues uprooted—the airy terrace and the verdant slope levelled with the general surface of the ground; every nicely-clipped hedge or arcade, pyramid or globe, were quickly banished from the lawn and gardens; right lines, whether of roads, or walks, or fences, were diverted into regularly flowing sweeps; the mansion which had been for years partially shaded and veiled by trees, was set out and exposed on a smooth and closely shaven lawn; hedge-row trees were exchanged for insulated clumps dotted over hill and dale; and straight and visible fences, gave way to crooked and invisible Ha ha's!

Thus the regularity of the old style was excluded, to admit the irregularity of the new; a change too recklessly made, and which has proved, in many instances, only a change from one kind of sameness to another fully as tedious and uninteresting.

Nor was the new style an imitation of what it was presumed to be founded on, namely, the painter's ideas of the most beautiful or most picturesque combinations of land, wood, and water. The opinion of the first reformers appeared to be, that, to depart as much as possible from the old style, by introducing irregularity, was all that was wanted to give the new scenery a truly and natural character.

The new style received the title of "English gardening;" and certainly there were some very perfect things of the kind executed in different parts of the kingdom, not, however, by clearing all the old features away, but by a judicious reservation of part of them, and not by an implicit adoption of every suggestion of the reformers, but by a tasteful rejection of many of their dogmas.

It is perfectly true, that, though the guiding principles of composition of both the painter and the landscape gardener are the same, there must necessarily be a great difference in the execution; the one endeavours to gratify the present, the other future generations. The painter can brighten his lights, deepen his shadows, give play to his outlines, and mellow his tints at pleasure, so as to preserve a well ballanced display of light and shade; all his objects whether on the foreground, in the middle distance, or in the off-scape, he can dispose as seems to him best. The height, and distance, and form of the mountains; the character and extent of water; the very forms of the clouds, and tints of the sky, are

all as his fancy or taste suggests. And neither is the painter confined to the real character of the trees, and shrubs, and herbs which he introduces into his picture; a burdock, or other monstrous weed on his foreground, answers his purpose as well as the finest plant in cultivation. Such worthless plants in a painting give no offence to the beholder in any way; and, moreover, the rudest, wildest scene may be preferred for the canvas, but which is seldom or never required to be, nor indeed ever should be formed by the gardener, because the most trifling mark of art about such a work robs it of every charm which it would otherwise possess.

The landscape gardener arranges all the ornamental planting of the park, and particularly near the house. Here comfort, convenience, cleanliness, and every other sign of high keeping and art must prevail; here all the taste and skill of the gardener should be displayed; here his ideas are peculiarly applicable; and when these foreground dispositions are fixed, he has to design and connect the scenery of the park therewith, and that of the surrounding country with both.

In the execution of all this, the most refined taste, united with a large share of practical, botanical, and arboricultural knowledge is absolutely necessary; and in this it is said the professional ideas of the painter would be available. Let us suppose, then, that a Claude Lorraine were engaged with the gardener in laying out an English garden; the trim neatness, smoothness, and regular edges of the walks and borders of the latter, would offend the eye of the former, who would rather see roughness, intricacy, and indistinctness prevail. This, however, would not be suffered near the abode of refinement and affluence; but the painter would advise the gardener to conceal his hard lines; to break the uniformity of the clumps; to give variety to the masses of planting, by associations of trees and shrubs of different tints and character; to place on the foreground the strongest growing herbs, the coarsest featured shrubs, and the quickest growing trees to flank the vistas which he would wish to have extended across the park, or which would let in distant objects of interest in the country beyond. The painter would also advise but few single trees to be planted; without having a few shrub like growths near their base; and also that all clumps and groups should be of one kind of tree, irregular in outline, and intermixed with under-growths, to creep out on the turf around them.

If water entered into the composition, the painter would advise it to be disposed in its natural place—the lowest ground; and whether a lake or river, he would have it as unlike a canal as possible. The natural abruptness of the banks he would preserve, as well as all their sinuosities and overhanging trees and bushes. Nor would he be anxious to expose too much of the water in one place, unless it would appear as a reach, either advancing towards or receding from the eye, for the sake of the reflections from the ripple on its surface. If a lake, he would choose to have it of a very irregular shape, and as much diversified by trees and islands as its size would allow, carefully masking its extremities, if such were too visible.

If buildings of any description, either for use or ornament, were in the landscape, the painter would advise them to be partly concealed, and only allowing the most ornamental or characteristic angle to jut out from among trees. If the park was of a finely undulating surface, consisted of smoothly rounded knolls, with winding dips between, the painter would adapt the forms of his groups and thickets, and the characters of the trees to correspond. On the other hand, if the environs presented strong natural features, as cliffs and rugged declivities, deep ravines forming the beds of mountain streams, &c., he would add such accompaniments of vegetation, alpine and aquatic trees, &c., as would harmonise with the general aspect of the place; so as to produce (whatever may be the character of the district) a well connected and harmonious whole.

Now if all this would be advised by a painter, or an amateur having a "painter's eye," it differs not a jot from what would be done by every landscape gardener who knows his business, or who deserves the name. Hiding the hard lines in the dressed ground, and employing more under-growths among the trees in the park, are the only additional amendments in the common practice, which the painter could recommend in laying out a park in the English style. He would also object to any great extent of lawn being seen from any principal station, because nothing is so horrifying to a painter as great blotches of any one colour on the canvas, without chequering of shadows, of flocks or herds, or of other objects admitting variety of tints; and therefore a park laid out by a painter would be rather a series of diverging glades, than a park dignified by the grandeur of its vast masses of wood, and its expansive extent of verdant turf.

That many of our parks, laid out in the style last alluded to, are lifeless and uninteresting, must be acknowledged. In passing through them, though they may have an air of grandeur suitable enough for a regal or ducal palace; yet no part of such scenery would be admired by the painter, because wholly unfit for the canvas. Hence it may be inferred that an English landscape gardener's park may be very suitable for a residence, and yet by no means equal to the *beau idéal* of a connoisseur, who may be blessed or plagued by possessing a painter's eye. Still it is very possible to bring the extremes nearer together; to diversify and enrich the naked tameness of the "capability" style; and to soften the asperities, and qualify the exuberance of imagination observable in some of the most celebrated paintings. J. F.

ARTICLE II.

ON THE CULTIVATION OF ERICAS,

BY THE FOREMAN OF A LONDON NURSERY.

HAVING had considerable experience on the culture of this beautiful and interesting tribe of plants, I submit the following practical observations to the notice of your readers.

Like all mountain plants, they will not long flourish in a damp or impure atmosphere, nor in one, however dry, if excluded from a free circulation of air, and full exposure to solar light. It follows, therefore, that in the selection of a proper habitation for them, one fully exposed to the sun, and in a perfectly dry situation, and constructed so that the plants may stand near the glass, capable at the same time of ventilation to the fullest extent, with the front and roof sashes rendered moveable when required, will be the most proper habitation for them.

A span-roofed house upon an economical scale, is well calculated for the cultivation of Ericas and their near associates. The whole of the side and roof sashes should be moveable, the height over the passage about seven feet, and the width eighteen, allowing three feet for each passage, three feet for the breadth of each of the front platforms, and five feet for the centre one, on which the largest plants are intended to stand. The top part of the roof should be covered with boarding of one foot from each side of the ridge. This is to support an awning of canvas, mounted on rollers, to exclude the cold during intense frost, and enable

the cultivator to dispense with fire heat, which I find is very inimical to the plants of this order.

From November till March the latter covering is occasionally required, and the former for shading occasionally, from June till September, after which periods both may be removed. The foliage of the heath tribe would sustain without injury the greatest degree of sun heat we ever have in this country; but it is the roots that require protection by partial shading, for when the sun acts fully on the pots they become heated to a great degree, and as the roots of all healthy heaths and similar plants are in close contact with the pots, they are rapidly dried up, or heated beyond the degree that they are capable of bearing; for as in their natural habitations they grow amongst thick herbage, and are partially shaded about their roots, they consequently are kept much cooler than if they were growing without any covering whatever. There are, however, some exceptions to this rule; but by far the greater number are so circumstanced.

No doubt heaths have been successfully cultivated in houses of the most ordinary description, but the success attending their growth has depended principally upon free ventilation, moderation in watering, an almost total absence of fire heat, a full exposure to the sun, and closeness to the glass.

Ericæ, like most similar shrubs, are readily increased by seeds and cuttings, and rarely by any other means. Seeds are often imported from the Cape of Good Hope, and are also frequently ripened in this country; from both of these, hybrid varieties are very likely to be obtained, for I believe that many heaths cultivated in this country, and considered as species, are no other than hybrids originated from seeds procured by one or other of those means. When we consider the operations that are constantly going on in nature, in regard to this subject, both in a wild and in a cultivated state, we are only astonished that more numerous varieties have not been recognised.

The best time for sowing seeds of this order is early in spring, say February and March; and for this important reason, plants originated from seeds sown in spring, will attain such a size and strength before autumn, as to enable them to outlive the winter following, which is a trying time for young plants. In preparing pots for this purpose, they should not be too large, 32's is the best. We need hardly remind the most inexperienced in cultivation, that they should be well drained, by being filled at least

two-thirds with broken pots, small stones or cinders. The soil used should be of the sort called very sandy peat. The seeds should be sown on the surface, (which must be made smooth and level,) and scarcely covered at all. When sown, watering should be regularly attended to, and applied with the finest rose pot. They should be placed in a cool, shaded frame, under glass, or plunged in a rather damp border, where the sun seldom shines, and covered with a hand glass. In such a situation water should be seldom applied, because the seeds being so minute, they are liable to be washed off in the process, and therefore, the less frequently they are watered the better. As the young plants appear, air should be progressively admitted to them, and every precaution now taken to guard against damp, an excess of which, as well as an excess of drouth, would be equally fatal to them in this state. When the plants have attained the height of one inch or so, they may be transplanted into small thumb pots, placing three, four, or five in each, as near to the edge of the pot as possible. From some cause, not easily explained, we find that young plants and cuttings root faster when placed in close contact with the sides of the pots in which they are planted, than when they are placed more towards the centre. After this first potting, they should be kept for eight or ten days in a close, cool frame, or pit, shading them from the sun in the middle of the day, and gradually exposing them to the air, until they are found to be so established as to stand the full heat of the sun. The greatest attention must be paid to a regular system of watering, for if they be allowed to become too dry, they will die off in a few hours time, and if kept too wet, they will damp off in an equally short period.

Almost all will strike root by cuttings; some sorts, however, requiring a longer period to do so than others. The most eligible wood for this purpose is the young wood of the present year's growth, when it becomes partially hardened, so as not to be liable to damp off. It would be impossible to convey an idea to the uninitiated, of the proper state that the wood should be in for this purpose, but the cultivator who knows anything of the matter, will readily understand me when I say, the wood should be fully matured, but before it had attained its dark colour, and to be, when slightly pressed between the finger and thumb, somewhat firm, but neither yielding to the touch nor yet quite hard. In regard to the length of the cuttings, much depends on the habit

of the different species. Some of the robust growing sorts may be from an inch to an inch and a half in length, while others of the more shy growing kinds can only be obtained about half that length. The cuttings selected, should be chosen from the healthiest plants, and taken off close to where they issue from the old wood. In preparing the cuttings, the leaves should be cut clean from the shoot, either with a sharp knife or fine pair of scissors, the end should be cut transversely across in a neat manner, so as not to leave the wound ragged or bruised. The leaves should upon no account, be shortened, neither should any more of them be taken off than just so far as the cutting is to be inserted into the sand.

With respect to the proper season for putting in cuttings of this order of plants, and indeed of most other slow growing kinds, the spring is the best, for the same reason given above for sowing seeds.

It sometimes happens, however, that cuttings cannot be obtained in a proper state at that season : when such is the case, recourse must be had to inducing the old plants to make wood fit for the purpose. This is to be effected by placing them in a little heat early in spring, they will then make plenty of young wood, which is the best for cuttings. In extensive genera, like that of *Erica*, it would be impossible to state any particular period of the year for commencing the operation of propagation by cuttings, because some one or other of them are in a fit state for the purpose on almost every day in the year ; therefore, the time for putting in cuttings should be regulated rather by the state of the plant than by the time of the year.

In extensive nursery collections, where great quantities of plants are wanted, one pot may be filled with cuttings of the same species, when such can be got in sufficient quantities ; but in private collections this is not necessary, for a few plants of a sort, in general, are all that is required. When this is the case, the kinds selected to be put in the same pot, should be nearly of the same habit as can be judged of at the time.

Unless this is attended to, one sort will be found to strike root in a much shorter time than others of the same pot, which makes it more inconvenient when potting them out. This, however, must always happen to a certain extent, for a little difference in the age or firmness of the cutting, even when the work is performed by the most experienced hand, will often make a difference in

the time required to strike root. When the pot is thus filled with cuttings, it should be well watered with a fine rose watering pot, and placed in a close shady part of the stove, admitting as little air as possible near to where the cutting pots are placed, taking care to water them freely every day. Indeed when put in this way, there is no risk of overwatering them; for having them well drained, the water is allowed to pass freely through, and so far from injuring the cuttings, they are benefitted by it.

However excellent the above mode of striking heaths may be, it cannot, under all circumstances, be applied in practice, because there are many cultivators who have not the convenience of a stove to place them in. A substitute for the stove may be found in a well regulated cucumber or melon bed, in which many strike heaths and other hard-wooded plants very successfully. The reason for applying heat to the cuttings is to excite them to the greatest possible degree, during which they will, if they are in a fit state, strike root very soon, or damp off at once.

The more usual method of striking cuttings of the generality of heaths, is to plunge the pots into coal ashes, rotten tan, or similar matter, in a rather damp, shaded border, covering each pot with a bell glass, and the whole with a close frame and lights. By this method the cuttings are longer in rooting, but as it is within the reach of every one possessed of a garden, however small, and, therefore, as it is attended with less risk from inattention, &c. we recommend it to their attention. It is necessary in preparing the pots for the cuttings, to select them about equal sizes, say that of thirty-two's, and to fill them to within an inch and a half from the top with broken pots, cinders, coarse gravel, or small stones, over which a thin layer of moss, (*hypnum*,) should be placed to prevent the finer particles of mould from being washed down amongst the drainage. The pot should then be filled to the brim with fine, pure white sand, as free as possible of earthy or irony matter, but as this is seldom to be procured sufficiently free of those matters; it may be well to wash it by putting small quantities at a time into a bag, and dragging it frequently through a cistern, or stream of water. When put into the pot it should be well watered, and pressed firmly down, the surface made smooth and level, and the cuttings put in as soon after as possible.

In the propagation of heaths it has been almost universally maintained that bell glasses should be used under all circumstan-

ces, that is, whether they be placed in heat, in a shady border, cool frame, or pit. When glasses are used, the greatest care must be taken that they be kept regularly wiped at least once a day to prevent damp from destroying the cuttings. Cuttings placed in a cool shaded border, frame or pit, should certainly be covered with bell or hand glasses, and these should remain on until they are rooted, and taken off only for the purpose of being wiped, and any damp or mouldiness removed from the surface of the sand in which they are placed. Regularity in watering, and also in shading, is absolutely necessary to insure success. When the young cuttings begin to grow, air must be gradually admitted to them, so that by the time they are rooted and fit for transplanting they may be able to withstand the sun's heat, and free exposure to the air.

(To be continued.)

ARTICLE III.

ON CHINESE GARDENS.

(Continued from page 108.)

THERE are, in different parts of China, many works of the kinds just mentioned ; but amongst the most considerable, are counted the Passage of King-tong, the Bridges of Fu-chew, those of Swen-chew and Lo-yang, with the Cientao, in the province of Xensi.

The first of these is a communication between two precipices, composed of twenty enormous chains of iron, each two hundred feet in length, which are covered with planks and earth, to form the road.

The second is a cluster of bridges between Fu-chew and Nanti, uniting various islands, that divide the river into different streams the principal of these consists of one hundred arches, of a sufficient size for the passage of ships under full sail ; it is built of large blocks of hewn stone, and enclosed with a magnificent marble balustrade, the pedestals of which support two hundred Colossal lions, artfully cut in the same material.

The third is a bridge at Swen-chew-fu, built over an arm of the sea, that sometimes is very boisterous : it is above three quarters of a mile long, thirty-five feet wide, and consists of one hundred and thirty piers, of an astonishing height, upon which are laid vast blocks, of a greyish granite, that form the road.

But the largest and most surprising work of the sort, that yet has been heard of, is the bridge of Lo-yang, in the province of Fokien : it is composed of three hundred piers of black marble, joined to each other by vast blocks of the same material, forming the road, which is enclosed with a marble balustrade, whose pedestals are adorned with lions, and other works of sculpture. The whole length of the bridge is sixteen thousand two hundred feet, or upwards of three miles ; its width is forty-two feet ; and the blocks of which it is composed, are each fifty four feet long, and six feet diameter.

The Cientao, or Way of Pillars, is a communication between many precipices, built to shorten a road to Pe-king. It is near four miles long, of a considerable width, and supported over the vallies upon arches and stone piers of a terrifying height,

In the mountains, on each side of these imperial roads, are erected a great number of buildings, surrounded with cypress groves, and adorned with works of sculpture, which afford constant entertainment to the passengers : these are the monuments of their wise men, their saints, and their warriors, erected at the expence of the state, and furnished with nervous inscriptions, in the Chinese language, giving an account of the lives and actions of those they commemorate : some of these buildings are distributed into many spacious courts and stately apartments being little inferior to palaces, either in magnificence or extent : they are furnished with all kinds of movables and utensils, much larger than the common size ; and a great number of Colossal figures are every where seen, representing officers, soldiers, eunuchs, saddle-horses, camels, lions and dogs, all placed in melancholy attitudes, with countenances expressive of the deepest sorrow.

Instead of roads, the center avenues are sometimes formed into navigable canals, from one hundred to one hundred and fifty feet wide, being sufficiently deep to admit galleys and other small vessels ; with horse-ways on each side of the canals, for the convenience of towing them, either against the wind or the stream. On these the emperor, and Chinese mandarines, are frequently conveyed, in large magnificent sampans or barges, divided into many splendid rooms : being sometimes attended by a considerable train of smaller vessels, of different constructions, adorned with dragons, streamers, lanterns of painted silk, and various

other ornaments ; the whole composing a very brilliant and entertaining show.

All the imperial forests, besides the high roads which pass through them, having many spacious avenues cut in the woods, spreading from different centers, like rays of stars, and terminating at idol temples, towers, castles, and all the interesting objects of the circumjacent country. The centers from which these avenues part, are of a circular or octagonal figure, with eight avenues ; or of a semicircular form, with only three branching from them. Their area is generally very considerable ; and its middle is adorned with a triumphal arch, a pagoda, a magnificent fountain, or some other considerable monument.

Where the extent is vast, each single avenue has besides, in its course, one or more open spaces, from which a number of smaller avenues again branch out, and terminate at many buildings, erected in the woods, for various purposes ; all which, without any confusion, add to the variety and intricacy of these compositions ; giving them an appearance of immensity not to be conceived, but by such as have seen them ; and wherever a deep valley, a large river, or an arm of the sea, interrupt and break off the course of the avenues, the plantations are nevertheless continued on the opposite shore, in order to make them appear more considerable.

In straight roads, of smaller dimensions, the Chinese very artfully imitate the irregular workings of nature ; for although the general direction be a straight line, yet they easily avoid all appearance of stiffness or formality, by planting some of the trees out of the common line, by inclining some of them out of an upright ; or by employing different species of plants, and placing them at irregular distances, with their stems sometimes bare, and at other times covered with honey-suckles and sweet-bryar, or surrounded with underwood. They likewise cut and dispose the branches of the trees in various manners ; some being suffered to spread, to cover and shade the walks ; whilst others are shortened, to admit the sun. The ground is composed of rises and falls ; and the banks on each side of the walk are, in some places, of a considerable height, forming hollow ways ; which they often cover at the top with bushes and trunks of fallen trees.

(TO BE CONTINUED.)

REVIEW.

The Boquet, or Ladies' Flower Garden, being a Description of those plants which will flower in the Room, and the Treatment most suitable for them.—By a Florist, Simpkin & Co. 12mo. pp. 102.

(Continued from page 112.)

“I shall therefore describe its whole treatment, beginning with the time that the bud has formed itself, which is generally in October, or November at the latest. Hitherto they have been kept comparatively cold, but as the winter approaches the windows are closed, and large fires constantly burning during the day, when at night the fire is allowed to go out, and consequently the room again becomes cold; this continual change of temperature, from cold to warmth, is one of the principal reasons of the buds falling off, for before the month of December the rooms were quite cool to what they are at this season of the year; it will therefore be perceived that it is highly necessary that the temperature be kept as nearly equal as possible; but I do not recommend keeping them in warmth at any time, although the temperature may be equal, it being quite an erroneous idea that they require heat to bring them into flower; and I have found that the most beneficial mode of treating them is by keeping the plants in a cold room, where there is hardly any fire kept, for it is a plant that in mild seasons will stand out of doors during the whole winter without receiving any injury; when in a cold room they will require very little water, once a week will be sufficient, unless the plant is evidently getting dry, which is not likely to be the case during the month of January and beginning of February; very great attention should be paid to its watering, as it is at this season that the buds commence to swell very fast, and the least overplus will cause them to drop off; therefore the quantity of water given must rest entirely to the judgment of the person who gives it, only having always in view that the plants must never be allowed to get quite dry, and at the same time not very wet. About the latter end of January, and again the first fortnight in February, it would be very conducive to the health of the plant to have the leaves carefully washed of all dust, which at this time they are sure to be covered with; after they have done flowering, they may be kept in a room where there is a fire, as at this particular stage of the plant heat is very useful, as it assists the growth of the plants, and the young shoots have time to ripen their wood before they set for bloom, which will be about October; they should then be put into a cold room, and receive the treatment already described, and which will be found to succeed if properly attended to.

Epacris.—Of this very beautiful and showy tribe of plants there are very many fine varieties, which continue flowering du-

ring the whole of the spring months ; in its appearance, both in flower and leaf, it resembles very much the *Erica*, and like those beautiful plants, blooms in great profusion. The species which flowers the earliest is *E. campanulata rubra*, a very pale rose-coloured flower, which is generally in flower by the latter end of January, and when in full bloom is very beautiful ; as, from the extreme delicateness of its colour, it will bear no comparison with any other tribe of plants. *E. impressa* : the flower of this kind is much longer and narrower than the former, and is of a deep rose or red ; it does not flower until nearly a month later than the other, and for show is one of the gayest in the whole tribe, as, when it is in its perfection, the plant is so covered with flowers that it is only at the extremity of the shoots that the leaf is discernable. There are also two very fine white ones which flower about this time, *E. nivalis* and *E. campanulata alba* : the latter is certainly the handsomest of the two, having a much larger flower and being of a clearer white ; although *E. nivalis* flowers the most abundantly, and therefore makes the most showy appearance. There is also a pretty variety, which is called *E. grandiflora* : this species continues flowering the greatest length of time of all the species, but never has so great a profusion of flowers in bloom at one time as the others ; the flower is about an inch and a half in length, being of a bright crimson towards the stalk, and at the mouth a pure white, so that the individual flowers are by far the most striking to the eye. There are scarcely any of this tribe of plants which have any smell, but that which they want in sweetness they will repay in beauty. In their treatment they should be watered once a day, and kept rather wet in preference to being very dry ; and will flourish equally well in a cold as in a warm room, and ought to be kept near the light.

Corchorus Japonica.—This plant is perhaps better suited to large collections than small, but as there is not so very great a variety of flowers during the early part of this month, it is not so very objectionable, especially as it is a pretty growing plant, and having a bright green leaf, with double yellow flowers, which blossom up the whole of the stem amongst the leaves. It is very convenient in its treatment, as it flourishes in a cold room, or in a heated one ; if there is any difference, it grows with greater vigour in the warm room than in the cold, and will bear a good supply of water. It would rather be adviseable to have a saucer placed beneath the plant, with a little water in it.

Daphne Mezereum.—This plant is perfectly hardy, and therefore need not be placed in a room, but will do very well outside the window. When in flower it is very gay, having a dark lilac flower, which blooms up to the branches, and is, when in full flower, very sweet. It never has any leaves while in blossom, but makes up for this loss by the great abundance of bloom which it produces. When placed in the open air, it will not require water more than once a fortnight, and if the weather is very frosty not even that. There are several other plants that bloom at the

same time as this, which make a very pretty mixture, and are very gay. The Snow-drop is one of the first; this pretty little flower is too well known to need any description from me. There is also the Winter Aconite, a bright yellow flower in the form of a buttercup, and which does not exceed two inches in height, and is very gay and showy. There are likewise all the varieties of the Crocus. Nor must I forget to mention the Hepatica, which is the prettiest of all the small flowers which bloom at this time, amongst them are several varieties; blue, pink and white, with a double and single variety of each colour: when in full bloom they are very showy especially when combined with the Crocus and other flowers of the season. They are quite hardy, and flower as well in town as the country; they will scarcely require any water during the time they are in bloom.

Verbena, or as it is now called *Aloysia citriodora*, but which is more generally known by the name of the Lemon plant, may be procured at this early season; but the leaves are extremely delicate, and must be kept close, as four or five minutes' exposure to the air would destroy the whole of them, having been forced into leaf so much before its natural time, for the sake of the beautiful scent which is emitted from it when touched. It is certainly a delightful little plant, and ought not to be absent from any room. It will require very little water each day, as, from the weakness of its leaves, it is not able to bear much, and should be placed in the warmest part of the room, where it will thrive very well, until about April, when it may occasionally be placed outside the window to receive the fresh air, but must not remain outside during the night until the middle of June. Indeed I should recommend keeping it in the room all night during the whole of the summer, as it preserves the scent much better as well as keeps a fine green to the leaf. The leaves of this plant, when picked off and carefully dried, will retain their beautiful odour for several years after, if put in thin paper or a small silk bag, to keep the air from them.

Lechenaultia formosa.—This beautiful little plant, in its appearance, is very similar to the Erica, and like those plants require to be grown in bog or peat earth. It is also remarkable for the great length of time it continues flowering, commencing early in February, and can scarcely be said to have finished its bloom the November following. In its growth it never attains a very great size, and is particularly adapted for small fancy vases, as it does not require a large pot, indeed it flourishes much better when grown in small-sized pots, and has a bright blood-coloured flower, but when confined in a room it is almost sure to change to a bright orange, but by being exposed to the air it very soon regains its former colour; it is not so difficult to keep as the Erica, but like them should never be allowed to get quite dry, but always be kept moist, at the same time not to be saturated with water. It is very hardy, and will bear to be exposed to the air during the

day time when the weather is not very frosty, and after the month of May can be kept out of doors both day and night.

Kennedya monophylla.—This is a very pretty little climbing plant, and for the room is very desirable, attaining about one foot and a half in height, and has a pretty bright purple flower, which blooms in bunches of about two inches in length; and even when the flower is off, the leaf still makes it a desirable plant. There is another species, *K. lilicina*, which has a pale lilac-coloured flower, and has the same kind of habit and growth as the other. These two varieties, when planted together in the same pot or vase, are very pretty, as, from their climbing habit, they twine one with the other, intermixing their flowers all over the plants; they should receive a very little water every day until about May, when they may be watered more plentifully; great care must be taken that it does not receive too much water, as the leaves will otherwise turn yellow, which immediately spoils the beauty of the plant.

The Little English Flora, or a Botanical and popular account of all our Field flowers, with Engravings on Steel of every description. By G. W. FRANCIS, Author of the Analysis of British Ferns.

Three years ago we were informed by Mr. Francis of his intention to publish a work on British plants, and the small pocket volume, of 174 pages, now before us, is the result. In the preface we are told that, the object of the Author in preparing this little volume, "is, first to invite the young to an examination of the flowers of the field," by pointing out the beauties they are every where to meet with, that thus additional charms may be added to their rambles over the meads and commons; secondly to induce a love for the science itself, by shewing that it is easy of acquirement, and that it yields instruction and delight, not merely in our after progress, but even from our first commencement of its study:—"and, he adds, "these important purposes I have endeavoured to accomplish, by giving a plain and popular description of all our common wild plants accompanying these with accurate steel engravings of every species: thus striving to win rather than demand the attention, and to present these little favourites in the alluring garb with which nature has herself invested them, rather than the mysterious and repulsive habit in which they are too often described, and to smooth as much as possible the study of Botany.

Mr. Francis is well and advantageously known to the public, as the author of an Analysis of British Ferns, a work which every cryptogamic botanist ought to possess. The 'Little English Flora' is cast from a similar model, but, in point of real usefulness, it will bear no comparison with the work before alluded to. The engravings are too small to afford much assistance in indentifying the species. This will be readily understood, when it is known that there are twenty engravings on each page, the size of which is only six inches by three. By this arrangement, the volume is small, and, we have no doubt, cheap. On this ground it can be recommended; the 'Little English Flora' will be found of great assistance, more especially on account of the popular and pleasing style in which it is got up.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

1. MATTHIOLA ODORATISSIMA. Sweetest Evening Stock.

(Bot. Reg. 25.)

CRUCIFERA. TETRADYNAMIA SELEGUOSA. SYNONYM. CHEIRANTHUS
ODORATISSIMUS.

Introduced to this country some years back, but is rarely to be met with. We lately saw it in fine bloom, which has a pretty appearance, the flowers are of a pale purple with yellow centre, they are most delightfully fragrant towards evening, much more so than the well known *Cheiranthus tristis*. The present species is a half hardy biennial, and does well either in the greenhouse or open border during summer. It seeds freely and is readily cultivated.

2. LÆLIA AUTUMNALIS. The Autumnal Lælia.

(Bot. Reg. 27.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native of Mexico, and now found in many collections of Orchideæ in this country, and it certainly merits a place in every one. The plant is of easy culture; it requires to be tied to a piece of wood, and as soon as fresh roots begin to push it is freely syringed, even two or three times a day till the growing season is over, when it is removed to a cooler temperature, and kept dry through the winter, after which, it is taken to a higher temperature and treated as above. The flowers are of a beautiful mixture of bright rose, crimson, and purple, with the labellum towards its base, white, spotted and streaked with dark brownish crimson; each flower is near four inches across, produced numerously, and very fragrant.

3. TRICHINIUM ALOPECUROIDEM. Foxtail Trichinium.

(Bot. Reg. 28.)

AMARANTHACEÆ. MONODELPHIA PENTANDRIA.

This singular looking plant was introduced into this country by Captain Mangles, R. N., from the Swan River Colony. It has bloomed in the collection of that gentleman's brother, R. Mangles, Esq., Sunning Hill, Berkshire; it is a half hardy annual flowering abundantly in the open border during summer; flowers are produced in spikes, green, tinged with rosy pink of a glossy appearance like the cockscomb; the flowers seem to protrude themselves out of a dense mass of fine hairs, like those of the feather grass, though not very showy, the flowers are very interesting. Dr. Lindley has stated that two other species are known to exist at Swan River, specimens having been given to the Doctor by Captain Mangles.

1. *Tr. Manglesii*. Flowers, pink at the tips, silvery at the base.2. *Tr. Stirlinghii*; silvery, just tinged with pink.

4. SALVIA CONFERTIFLORA. Close flowered Sage.

(Bot. Reg. 29.)

LABIATEÆ. DECANDRIA MONOGYNIA.

Discovered by Mr. Macrae, near Rio Janeiro, Brazil. It is like others of this family, thriving well either in the greenhouse, conservatory, or open

off, it receives a great check. The bulbs are again to be taken up in October, and replanted as before, not permitting them to remain any time out of the ground. Moisture seems essential to the perfection of the Hyacinth; and it is those which remain in the ground, and of course subject to its influence, that are not at any time affected with the ring disease, by which many of which are placed in the stove are lost every season.

The compost best suited for them is, one barrowful of loam from rocky places, one ditto well rotted cow-dung. This should, if possible, be three years old; one third of a barrowful of mould, produced from rotted tree-leaves, and about a fifth of a barrow from an old cucumber-bed. With this the bed is to be made two and a half feet deep, and the surface covered with turf mould, to preserve the bulbs from frost.

New Plants.

TROPEOLUM TRICOLORUM.—We have recently seen several fine specimens of this most lovely climber, which is certainly unequalled for beauty and neatness. At the exhibition of the London Horticultural Society, held on the 18th, inst., there were several plants in most profuse bloom, and trained variously, which produced a fine effect; one was trained to cover a circular wire frame about four feet in diameter, covering it with bloom in every part; a second, a wire frame about four feet high in the form of an urn, and in addition to the frame being covered down to the pot, the framing was so constructed as to inclose the pot, and the flowers concealed it from view; a third, was trained over a frame constructed globular, about three feet in diameter, and its surface entirely covered with bloom; a fourth, trained up to a centre, having a turban headed from three feet across, and in addition to the head being covered, the shoots hung pendant in beautiful bloom.

In these and other similar modes the plants were trained, and being in a high degree of cultivation, blooming profusely, were justly admired. When the bulb once becomes strong, the plant is found to be of easy culture; the shoots being spread around the plant upon some finely sifted soil, just covering them over, and gently pressing them down, they will then speedily take root. This is a very ready method of increasing it, and will doubtless, on becoming generally known, allow the introduction of several plants into every greenhouse and conservatory. The soil in which the *Tropeolum* appears to thrive best, is a sandy loam being well drained, care should always be taken, as have been observed by writers in former numbers of the Cabinet, not to place the tuber more than one-half its depth in the soil; we find too that the plant can be easily cultivated in a light sitting room. The kind we saw in 1836 flourishing in the valuable collection of C. Rawson, Esq., Hope House, Halifax, under the very successful management of our friend Mr. Menzies, is the most handsome of the tribe, we gave a figure of it at the time, (August), and seeing a plant of it in bloom, at the above mentioned exhibition, in contrast with the true *T. tricolorum*, we were struck with its decided superiority, the flowers being much larger and of finer colours. The kind was named at Mr. Rawson's, *T. elegans*, and is justly entitled to such appellation. We have seen it named in one collection, *T. tricolorum majus*.

TROPEOLUM BRACHYCEROS is better cultivated this year than we have seen it before, trained, and otherwise treated as *T. tricolorum*, it produces a pretty contrast with it. Its yellow, delicately dark marked flowers being neat and pretty.

TROPEOLUM TUBEROSUM is now progressing fast plants are fine for turning out; they will no doubt amply repay by their beauty at the end of summer and autumn. The plant is very easy of propagation by cuttings, and one plant will produce near a peck of tubers. It is found to throw the plant early into bloom, cut a small trench with a spade around the plants, about two feet from its base, and fill up the trench with sand, this checks its



luxuriance and causes it to bloom immediately. The beauty, and ease of culture of *T. pentaphyllum* is too well known to require any commendation.—
CONDUCTOR.

HOVEA PUNGENS.—This beautiful plant is of a dwarf habit, with narrow leaves, resembling the Rosemary. The flowers are of the most intense blue. It is a native of the Swan River, and was raised by Robert Mangles, Esq. This is a very desirable plant to those who have a small greenhouse.

REFERENCE TO PLATE.

GARTH'S JOAN OF ARC. *Pelargonium*. This most superb kind we saw in bloom in the fine collection of Mr. Catleugh, and it is certainly the best flower among the vast variety of fine kinds we have seen during a visit to every collection of note; no drawing can do justice to its beauties and excellence. The following kinds are among the best we have seen, and merits a place in every collection.

CHORIZEMA VARIA. This new and very fine species was recently exhibited at the London Horticultural Societies' Room in Regent Street, and at the exhibition on the 18th, inst., at the Societies' garden. Mr. Hally of Blackheath, exhibited a plant finely in bloom at the former place; and Mr. Veitch, of Exeter, at the latter; Mr. Veitch's plant was about seven feet high, furnished from the bottom to the top with numerous spreading branches, and central shoots, each terminating with a spike of flowers. The plant is of very rapid growth, easy of cultivation, and a most profuse bloomer. The flowers are produced closely on the spikes, and thus make a show, and in this particular, very much exceed some other kinds of *Chorizemas*, whose flowers being so remote from each other, give but little effect. This very superior kind which deserves a place in every greenhouse and conservatory; in the latter, it appears as if it would become a magnificent tree, and if duly encouraged when grown in a pot, an object of considerable attention. Dr. Lindley noticed at the meeting, that it was one of the most valuable acquisitions of this class of plants, which had been introduced for some time.

GLADIOLUS RAMOSUS. This very beautiful species we saw in bloom in the fine collection of Mr. Groom, of Walworth; when we saw it in bloom last summer, it was offered at three guineas per plant, but may now be obtained for fifteen shillings. It is of vigorous habit, and blooms most profusely in the open border, when grown among others of its beautiful family its contrast is very striking.

FLORICULTURAL CALENDAR FOR JUNE.

ANNUALS.—See pages 43, and 72, Vol. I.—Those annual plants that have not yet been transplanted out, should now be done, in cloudy and showery weather, keeping as much earth to their roots as possible, now supporting those with sticks that require it—thin out where too thick. Tender annuals may now be turned out into the flower borders; they should be refreshed at least once a day with water, and if the sun be very powerful they will require to be shaded, till they have taken fresh root: those that remain to flower in pots, must be frequently supplied with water, repotting, &c., as they require it. Finish transplanting perennial and biennial plants, sown in spring.

ROSES.—Cutting of Garden kinds may be put off by the middle of the month; insert them firmly in the soil, and cover with a hand-glass—a shady

border is the best situation for them. Cuttings of most kinds of Greenhouse plants should now be put off.

CARNATIONS AND PINKS.—Laying the former, and piping the latter, will be required by the end of the month. Seedlings should be planted out singly into pots or open borders. Those Carnations in pots require particular attention in keeping them well supplied with water, and to support the flower stems by tying them to neat green sticks with bass; pipings of the young shoots may still be put in; those cut at the second or third joint make the handsomest plants; they should be kept shaded from the hot sun, otherwise they will soon get scorched and dried up, they should be finished layering by the middle of the month. Pinks may still be propagated by pipings as in June. Auricula plants in pots will require a little water frequently in hot weather, taking care not to pour it on the heart of the plant—all dead leaves should be removed—if any of the plants are attacked with the green fly, they should be smoked with tobacco,

RANUNCULUS AND ANEMONE ROOTS.—Should any bulbous rooted plants, as Ranunculuses, Tulips, Anemones, &c., now be past flowering, and their leaves decayed, they should be taken up, well dried, cleaned, and the offsets separated, and put in a cool airy place, till the planting season again commences.—See articles in Vols. I. and II., of the Cabinet.

CAMELLIAS—which have ceased blooming, will now require to be excited by being taken to a higher degree of heat, and frequently syringed, this will induce vigorous shoots, and an abundance of flower buds.

CHRYSANTHEMUMS.—See pages 73, 74, and 81, of Vol. I. Plants in small pots should be repotted into larger.

DAHLIAS.—See pages 3, 22, 66, and 95, of Vol. I.; and articles in Vol. 2, and Vol. 3, page 100.

TULIPS.—See page 21, Vol. I.

GREENHOUSE AND STOVE ANNUALS.—Such as have been grown hitherto in small pots, should be repotted into larger for the summer's growth.

AURICULAS—may be repotted and placed in a shady, but airy, situation. Transplant seedlings, also of Polyanthuses.

PANSIES.—New beds may be made by taking off rooted offsets or by piping, shading them for a few days after removal. Such will bloom profusely at the end of summer.

CAMELIAS—If the new shoots have nearly done growing, place the plants in a warm greenhouse, or in a stove of 70 degrees, in order to assist the plants in producing flower buds.

HERBACEOUS PLANTS—in flower beds should regularly be tied up as they advance in growth, not allowing them to grow too far before this attention is given, or many kinds will become unsightly.

BALSAMS.—See culture of, in Vol. I.

TRIVERANIANIS. See Vol. I.

SEEDS of hardy Biennials, as Sweet Williams, Scabious, &c., may be sown for plants to bloom next year.

THE DOUBLE SCARLET LYCHNIS, &c., &c.—The double scarlet Lychnis, and such like plants, should be propagated by cuttings. Dahlia cuttings will easily take root if placed in brisk heat. Continue to cut box edgings, and hedges, where it was not done last month. Where it is desired to save seed of Ten Week, Russian, or German Stocks, only allow those single ones to remain, the flowers of which have five or six petals; if such be reserved they will generally produce double flowering plants. Towards the end of the month, Roses may be budded: the first week in August is, however, considered better.

THE FLORICULTURAL CABINET,

JULY 1st, 1839.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE MANAGEMENT OF HOT HOUSE PLANTS

BY A PRACTICAL GARDENER.

THE house intended for the growth of stove or tropical plants, should be constructed so as to give a proper command of artificial heat in the winter season, when a high temperature is requisite for the preservation of the plants. These, being natives of warm climates, require a strong degree of heat, to induce them to grow and flourish in the confined apartments that are allotted for their cultivation.

The thermometer ought to be regulated, mornings and evenings, in this department, from 60 to 70 degrees : otherwise, the cold cutting winds that generally pass between the laps of the panes of glass, will prove very injurious to the tender shoots and foliage of many of these exotics. When the atmosphere of the stove increases to 70 degrees by the influence of sun heat, a little air should be admitted in the middle of the day, but taken away again early in the afternoon, so as the house may be shut up warm from the effects of the sun, which is more advisable than having recourse to strong fires for the purpose ; and as the use of the bark bed is now becoming very generally exploded, for the cultivation of tropical plants, a higher degree of temperature is necessary for the health and preservation of these ; but, as many of the tender exotics will succeed better by having a slight degree of bottom heat at their roots, this may be successfully supplied to them, by filling the bed, or pit, with fresh tree leaves, or tan,

every autumn, and covering the surface over with sand or coal ashes, for the pots to stand upon; when these should be arranged according to their different sizes, without plunging, as the heat arising from the fermenting substances will increase the temperature of the house, and produce a mild congenial heat to the roots of the plants, which will greatly facilitate the growth of the more tender species. The pots remaining unplunged on the bark bed, will not be so subject to have their roots injured with worms, which is always the case when plunged in the bed, and which are very pernicious to the young roots. During the winter months, when there is but little sun to dry up the moisture, great care must be taken not to give any of the plants too much water; it is preferable to give them little, and frequently, as they may appear to require it, than to deluge the pots with too much moisture, in their quiescent state. When the flues or hot water pipes are pretty warm, the pouring of water upon them will produce a fine steam, very beneficial to the plants, and also obnoxious to the insects, whose depredations should always be kept in subjection. When the Aphis, or green fly infests the young shoots, recourse must be had to fumigation with leaf tobacco, or be plunged over head in a solution of tobacco water. The advantage of a mild or rather calm evening, should be taken, and the houses well filled with the fumigating bellows, which will instantly destroy these noxious depredators. The plants will require to be well syringed the following morning, in order to displace any of the fly that may cling to the foliage; and if they do not appear all to be destroyed, a repetition of fumigation should be resorted to the ensuing evening, which will effectually clear the plants of these insects. When the weather is at all favourable, the syringe should be frequently applied in the evening, and the house shut up warm; this moist heat will, in general, keep the red spider under, especially in the early part of the season; but if this intruder begins to get a head, a little sulphur sprinkled over the hot pipes, or flues, will keep them in abeyance. The white mealy bug and scale are more difficult agents to get rid of, and require to be brushed off as soon as they begin to appear, otherwise they will become very troublesome. Frequent fumigations of tobacco will, also, considerably check their progress.

The soil that appears most appropriate for the growth of the greater portion of stove plants, is sandy loam, consisting of the

sward from a pasture, which should be thrown into heap, to decompose and pulverise for a short time previous to using; to which a portion of peat soil, mixed with it, will be a suitable compost for the growth of most tropical plants. When there is a scarcity of peat, a mixture of decomposed tree-leaves may be applied in its stead, with great advantage. Should the soil not be of a naturally sandy quality, a little sand should be intermixed, so as to render it light, and free for the roots to run in.

The plants should all be examined in March, or April; and such as appear to be in want of fresh pots, should be shifted into others, a size larger; but the operation of shifting, and size of the pots should be regulated according to the state of the plants. The more luxuriantly inclined species will require a larger supply of nourishment than those of less delicate habit, and may, therefore, be admitted into larger sized pots without injury, whilst the more delicate growing sorts must not be over-potted; rather repeat this operation, as the roots appear to fill the pots, than put them into too large sized pots at once. The pots that are used for this purpose must be well drained with small pieces of potsherds, or any other material that will permit a free passage for the superfluous moisture. There should be placed next to the drainage a little of the rough fibrous substance that is collected from the soil, which will admit of a ready penetration of the water through it, and prevent the mould in the pots becoming too much saturated with wet; as nothing is more injurious to the tender roots than to have the soil soured about them when in a dormant state. During the course of the season, they will require to be frequently examined; and such as appear to have out-grown their pots, to be removed into larger ones; as, also, any that are in an unhealthy state should be shook out of the pot, and the roots examined; and such as appear in a decayed state, cut away, and the plant fresh potted; but observing in these instances, to use rather small pots than large ones. In Autumn the whole stock should be carefully looked over; and those that appear too much confined, for want of pot room, may be re-potted into larger sized ones; care, however, should be taken not to disturb or injure the roots at this advanced season. During the Summer months, and growing season, they should be well supplied with water, and frequently syringed over their foliage, and the borders and footpaths, &c kept in a moist state, particularly in hot weather, which will be very conducive to the health and

vigour of the plant. The atmosphere of the house will require to be duly attended to, and the thermometer regulated mornings and evenings, at 65 degrees, which may be allowed to vary from 90 to 100 degrees, by the influence of sun heat.

Most sorts of tropical plants are increased, either by cuttings, seeds, or dividing at the root, whence offsets of the Orchideæ and Cryptogamia genus are procured; and when those throw out such suckers, or side offsets, we have a plant supplied with roots immediately, which may be, at once, potted, and treated accordingly. I may, however, observe, that these suckers, or offsets, should be allowed to form good roots before they are taken from the mother plant, which will the better secure their future success. The hard woody kinds may be propagated by cuttings, which will root freely in most instances, when planted in a sharp sand, and placed in a shaded situation of the stove, or in any other apartment where they can be shaded from the effects of the mid-day sun; as a small pit or frame is generally appropriated for this purpose, which can readily be shaded by throwing a mat over the lights while the cuttings are striking root: some of the species will require a slight degree of bottom heat, to induce them to throw out young roots. The most suitable season for the propagating of tropical plants, is from January to July; but many of the kinds may be put into the cutting pots at any period of the year, providing that the young shoots are in a proper state, as some species require the wood to be ripened and firm before they are put in; whilst others may be increased when the shoots have grown only sufficiently long for the cutting. In stripping the foliage from the shoot, care must be taken not to injure the bark, and not to clear away more of the leaves than are necessary for the insertion of the lower end of the cutting in the soil or sand in the pot, where they are all inserted; a gentle watering should be given, to settle the soil about them and the pots then covered with hand-glasses until the cuttings begin to grow, and throw out young roots, when a little air may be given, to prevent their being drawn up in a weak state. The sand, or mould, in which they are planted, must not be saturated too much with water, otherwise it will rot the cuttings.

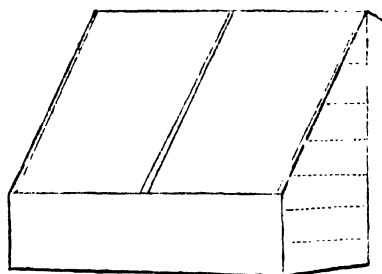
When the plants have struck root, they should be immediately potted off in small sized pots, and placed in a slight hot-bed for a few days, and kept shaded from the effects of the mid-day sun until they have got a little established, when they may be removed with safety to the stove.

ARTICLE II.

ON FLORIST FLOWERS—THE AURICULA.

BY FLORA.

IN my last paper, having promised you the routine of my monthly culture of the Auricula, I therefore, to redeem my pledge, send this, with a sketch of my Auricula-house or frame, the dotted lines shewing where the laths on which the sliding shelves lay.



I shall begin my Auricula-year with *August*, that being the month in which the general potting takes place for spring bloom.

Early in the month, or the last week in July, prepare the soil as before stated, prepare also some thin sod or sward, and having taken care that it is half dry, take an empty pot, and cover the hole in the bottom with a piece of shell or potsherd, lay a piece of this half dry sod upon it, and then your prepared soil, till the pot is about half full, take the old plant and shake the soil from it, taking off all rooted offsets which must be put either singly into small pots or four plants into a larger pot, pull off all the dead or yellow leaves, and examine the root to see if any part be decayed, if so, remove all the decayed or brown roots, for the plant will never thrive when the root is diseased. If you cut or break it, let it be till the wound is healed, or pot in dry soil, and do not water for a day or two; spread the roots of the plant all around the soil, and fill up to the top level with the edge, do not press it down with your fingers, but give it a slight knock or two on the bench, which will settle it about half an inch and leave room for holding water. Look to the neck of the plant all round, that it is a proper depth in the soil, then water gently about the edge

and place the plants in a shaded situation. If the weather is dry and hot, they will require a little water every evening round the pot edge; a shower of rain at this season will not hurt them, only do not let them have too much, for it not only washes away the nutritious part of the soil, but also does the plant harm by giving it an inclination to rot, by the wet lodging too long about the neck. If it is very sunny, shade the frame with mats during the day, and having the back doors taken quite away at this season, prop the edges of the front sashes up, so that air may be circulated freely through the whole both day and night.

September.—No more is required this month than examining the plants frequently to see that they are free from the green fly, caterpillars, &c. and in a sound healthy state, if the green fly should infest them, this is easily cured by closing the frame and fumigating with tobacco smoke, water frequently round the edge of the pot, and the plant will grow freely and strong.

If a plant looks yellow or sickly, be sure that all is not right with it, lose no time in taking it out of the pot and wash it clean, if any brown or decayed place appears, take it quite out with your finger nail, or a piece of wood, but do not cut it with a knife, let it lay out of the soil till dry, and then repot it in dry soil, use a plaster of bees wax or tallow over the wound to keep the damp from it, but if possible, keep the wound quite out of the soil; keep it dry for a week or more, till it begins to recover, water with great caution till it show signs of growing, then set it in its place.

October.—Less water must now be given as the plants cease from growing, and must be regularly prepared for the winter, that is, they must be furnished with less sap, and of course they will become less succulent and less susceptible of frost or damp, they must have all the air possible by the sashes still remaining propped, and the door off during fine weather.

November.—This is often a fatal month for the Auricula, the damp stagnated state of the air, together with cold, and want of a proper elevation of the plants above the wet surface of the ground, are felt most severely, but if they have been regularly prepared last month by being kept dryer than before, they will bear it very well; very little water is now required, keep them entirely from rain, but give as much air as possible, examine the plants frequently as to their soundness, &c.

December.—No water must now be given except the plants turn soft for want of it, and then very little will suffice; pick off such yellow or dry leaves as can be removed without making a wound, but do not force them off, which would probably make a wound, and the neck be injured, and prove fatal; at this season of the year keep your frame closer, as frost and snow, may now be expected.

January.—This month must begin as December ends, by keeping all close in frosty or coarse weather, but give air every fine or fair day, give very little water, if any, keep all as clean and dry as you can about the plants.

February.—The heart of the plants will now begin to look of a fresher green, and the leaves to give evidence of a renewal of life, they must have a little water to assist nature in her process of forming the embryo flowers, about the second or third week, according to the season, take off all the surface soil from the pot without disturbing the fibres, and put some fine rich soil on them; now is a good time for removing any rooted offsets, give water once a week, but do not be too eager in setting them to grow too soon, for if a severe fit of weather should come, your succulent plants might be in danger, give all the sun and air you can and cover with mats at night.

ARTICLE III.

ON THE TREATMENT OF MIMULUS' IN POTS.

BY W. M. P.

ABOUT the beginning of March I take off cuttings from my various selected varieties, which I plant singly into 60's, using a compost of two-thirds loam and the other third leaf and sand, merely to keep the soil a little open, I then plunge them into a bottom heat, and when they are rooted I take them out and place them on the front shelves in the greenhouse; when the roots fill the pots they will require to be shifted into 48's, using the above compost with an addition of rotten cow-dung. When I finally shift them, which is generally about the latter end of June, I put them into as shallow pots as I can procure, from sixteen to eighteen inches in diameter, as the roots always incline to run on the surface, which ought to be pegged down and tied up neatly to stakes as they grow. I allow them abundance of water as they

come into flower, (I have seen pans filled with water put under them, but it is very injurious, as it sours the soil,) for if neglected the flowers will be small.

When they are done flowering, I give them less water, until I withhold it altogether, I then cut them down to the surface, and put them aside in any back part of the greenhouse until they begin to push in the spring, when I take them out and place them on the front shelves in the greenhouse, giving them a good watering, when, in the course of a few days they will begin to shew their young shoots.

If you think the above remarks are worthy a place in your useful Publication, they are at your disposal.

W. M. P.

Uffington Gardens, May 1839.

ARTICLE IV.

REMARKS ON THE CYPRESS.

BY AN HORTICULTURIST.

THIS tree, which is the symbol of eternal sorrow in all the civilized countries of Europe; is also the funeral tree of the east, from the Persian Gulf to the Caspian Sea; and it is likewise dedicated to the dead from Mazenderán to Constantinople, as well as to the utmost bounds of China's fruitful shores.

Claudian tells us, in his admirable poem of the Rape of Proserpine, that when Ceres decided to travel over the earth in search of her daughter, she hastened to Etna, to prepare the torch which was to light her on the road during the night; and that having rooted up two gigantic cypresses, the goddess threw them into the crater of that mount, which being inflamed by the sulphur, augmented the fires of Etna; and from thence the ancients, we presume, dedicated this tree to Pluto and Proserpine. The Romans placed a branch of the cypress tree before their dwellings when any one died, which remained as long as the corpse was in the house; and which it then accompanied to the funeral pile, or the tomb.

Lucan, who wrote about the middle of the first century, informs us that the cypress was then only used at the funerals of persons of distinction.

The Turks of the present day attend most religiously to the planting of the cypress tree at the tomb of their departed friends and relatives; and they are always careful to select the upright variety, as the spreading cypress would, in such situations, be the cause of much sorrow to them, from their belief that when the tree grows with a spiral point towards heaven, it indicates that the soul of their friend is ascended into the regions of bliss. The Armenians are not allowed to plant a cypress tree, at the graves of their deceased friends, but they are permitted to plant any branching tree, as the apple, oak, or elm, &c.; which, from its crooked branches, indicates, as the Mahommedans affirm, the impossibility of the ascension of Christian souls. When will reason ascend her universal throne!

Lady M. W. Montague mentions a cypress tree in a garden at Kujuk Checkmedji, that was converted to rather a singular use, "The house and garden now belong," says her Ladyship, "to a hogia, or schoolmaster, who teaches boys here. I asked him to show me his own apartment, and was surprised to see him point to a tall cypress tree in his garden, on the top of which was a place for a bed for himself, and a little lower one for his wife and two children, who slept there every night. I was so much diverted with the fancy," says Lady Mary, "that I resolved to examine his nest nearer; but going up fifty steps, I found I had still fifty to go up, and then I must climb from branch to branch with some hazard of my neck. I thought it therefore the best way to come down again."

Cato wrote more on the cultivation of the cypress than on that of any other tree; and he calls it a Tarentine tree; but Pliny says, that was from its being first planted in that neighbourhood, and that the isle of Candia is its natural country; where, he says, when the ground is ploughed up, the young plants are sure to appear, and that in many parts of that island, the cypress trees spring up without culture; particularly on Mount Ida, on which they grow to the very point, although it is continually covered with snow. Hanway says, some of the mountains near Reshd, in Persia, are covered with cypress trees. Thus, like the cedar, its birth-place is a cold bleak mountain; and like that majestic tree, it lives almost to eternity, and its timber seems nearly imperishable. Sir W. Ousley tells us, in his travels, that "the beautiful and venerable cypress of Fassa has been the boast and ornament of that city for above a thousand years." Pliny speaks of a cypress that was

planted when the foundation of Rome was laid, and which fell, he says, through careless neglect, on the last year of Nero's reign. The same author tells us, the famous statue of Vejovis, Jupiter, in the capitol, was made of cypress wood; and that when he wrote it was perfectly sound, although it had been dedicated and consecrated to the temple since the second year of the foundation of Rome. Theophrastus, who calls this tree *Kupariton*, tells us, that the doors of the celebrated temple of Ephesus were formed of this durable wood; and the doors of St. Peter's church, at Rome, were framed of cypress timber, which lasted from Constantine, to Pope Eugenius IV.'s time, which was eleven hundred years, and were then sound and entire, when the pope took them down to change them for bronze gates. The Egyptians kept their mummies in chests of cypress wood; and Thucydides, a Greek historian who wrote about 400 years before the birth of Christ, tells that the Athenians used to bury their heroes in coffins formed of this timber; and Aristocles, the celebrated Athenian philosopher, (who was called Plato, from the largeness of his shoulders), and who flourished about the same time with Thucydides, would have the laws and sacred rites inscribed on tablets of cypress wood in preference to brass.

The Babylonian history affirms, that the lasting bridge, which Semiramis caused to be built over the Euphrates, about 1960 before the Christian era, was entirely formed of this timber; and some learned writers, who do not hesitate to go 389 years farther back, endeavour to prove, that the gopher mentioned in Scripture as the wood of which the ark was built, was no other than cypress, and which is not confuted by other learned authors; such as Isa, Vossius, and David Kinchi, who will have gopher to signify only resinous timber. Epiphanius, a bishop of Salamis, who died A. D. 403, tells us, some relics of the ark, lasted even to his days: and which was judged to have been of cypress. It is known, that at Crete this timber was employed in building the largest ships; and Virgil tells us, "that cypress provides for keels of ships that scour the watery plains." Aristobulus affirms, that the Assyrians made shipping of this timber; and so plentiful was this tree about those parts of Assyria, where the ark is conjectured to have been built, that those vast armadas which Alexander the Great caused to be equipped and sent out from Babylon, consisted only of cypress.

(To be Continued.)

ARTICLE V.

ON CHINESE GARDENS.

(Continued from page 134.)

FREQUENTLY too, the course of the walk is interrupted by a large oak, or elm, or tulipifera, placed in the middle; or by a screen of trees running quite across; which, when the part on one side of the screen is opened and illuminated by the sun, and the part on the other side close and shaded, produces a pleasing contrast.

I have often seen, in China, berceaus and arbors, not of lattice-work, as in France, but of bamboo, hazel, and elm; whose branches being interwoven at the top, formed an arch not at all displeasing to the eye, and exceedingly useful, during the heats of summer: and to render these cool retreats more agreeable, jessamine scarlet beans, sweet-scented peas, granadillas of several sorts nasturtiums, the convolvus major, and many other kinds of climbers, were planted round the outside; forcing their way through, enriched the sides and arches of the walks in a very beautiful manner, I have likewise seen, in Chinese plantations, walks bordered with the cut yew and elm hedges, so common in most countries of Europe, which the Chinese Artists sometimes admit of, for variety's sake; but they never have the stiff appearance of our European ones: the shears are used sparingly; towards the top the branches are suffered to spread unmolested; and even in the cut parts of them are seen large masses of other plants forcing their way through; such as the sycamore, the fig, the vine, and others, whose foliage and verdure are most opposite to those of the hedge.

The dimensions both of their straight roads and walks, vary according to the purposes they are designed for; and, in some degree too, according to their length. Roads or avenues to considerable objects, are, as has been observed, generally composed of three parallel walks: that in the middle being from thirty to one hundred and fifty, or even two hundred feet wide; those on the sides, from fifteen to forty. In their Gardens the principal straight walks are never narrower than twenty feet; and seldom broader than forty-five or fifty: and the smallest are at least twelve feet wide. Thirty to thirty-six feet is called a sufficient width for a length of two hundred yards; forty to fifty for one of four hundred; sixty for one of six hundred; and seventy

for a length of eight hundred yards : and when the extent is more than this last dimension, they do not tie themselves up to any proportion, but encrease their width as much as they conveniently can ; never, however, exceeding one hundred and fifty, to two hundred feet ; which they think the utmost width that can be given without rendering the avenue disproportionate to the trees that border it

In the construction of roads and walks, the Chinese Gardeners are very expert, and very circumspect ; they never situate them at the foot of mountains or rising grounds, without contriving drains to receive the waters descending from the heights, which are afterwards discharged by arched gulleys under the roads, into the plains below ; forming, in the rainy season, a great number of cascades, that increase the beauty of the scenery. The roads which are designed for carriages, they make as level as possible ; giving them a solid bottom, and shaping them so as to throw off the rain-waters expeditiously : they use, as much as possible, the nearest materials, to save expence ; and are very judicious in employing different soils to form mixtures, which never become either hard or slippery ; never loose in dry weather, nor deep in wet ; not easily ground into powder ; nor ever forming a rough flinty surface, difficult and painful for horses to move upon.

Their walks are either of grass, of gravel, or chippings of stone covered with a small quantity of coarse river-sand. The first sort, which are seldom used but in private Gardens, they being too liable to be spoiled in public walks, are made of the finest and cleanest turf that can be found on downs and commons ; and they are kept in order, by frequent mowing, and rolling with large iron rollers. The second sort are made of binding gravel, laid about six inches deep, upon the natural ground : if it be dry, or if swampy, upon brick rubbish, flint stones, or any other hard materials, easiest to be had : and these are also kept firm, and in great beauty, by being frequently rolled. Those of stone are composed of gallets, laid about a foot thick, rammed to a firm consistence, and a regular surface ; upon which is put a sufficient quantity of river-sand, to fill up all the interstices, this done, the whole is moistened, and well rammed again.

Both in their roads and walks, they are very careful to contrive sink-stones, with proper drains and cess-pools for carrying off the waters, after violent rains : and to those that are upon descents,

they never give more fall at the most than half an inch to every foot, to prevent them being damaged by the current of the rain-waters.

As China, even in the northern provinces, is exceedingly hot during summer, much water is employed in their Gardens. In the small ones, where the situation admits, they frequently lay the greatest part of the ground under water, leaving only some islands and rocks; and in their large compositions, every valley has its brook or rivulet, winding round the feet of the hills, and discharging themselves into larger rivers and lakes. Their artists assert, that no Garden, particularly if it be extensive, can be perfect, without that element, distributed in many shapes: saying, that it is refreshing and grateful to the sense, in the seasons when rural scenes are most frequented; that it is a principal source of variety from the diversity of forms and changes of which it is susceptible; and from the different manners in which it may be combined with other objects; that its impressions are numerous, and uncommonly forcible; and that, by various modifications, it enables the artist to strengthen the character of every composition; to encrease the tranquillity of the quiet scene; to give gloom to the melancholy, gaiety to the pleasing, sublimity to the great, and horror to the terrible.

They observe, that the different aquatic sports of rowing, sailing swimming, fishing, hunting and combating, are an inexhaustible fund of amusement; that the birds and fishes, inhabitants of the water, are highly entertaining, especially to naturalists; and that the boats or vessels which appear upon its bosom, sometimes furiously impelled by tempests, at others gently gliding over the smooth surface, form, by their combinations, a thousand momentary varied pictures that animate and embellish every prospect. They compare a clear lake, in a calm sunny day, to a rich piece of painting, upon which the circumambient objects are represented in the highest perfection: and say, it is like an aperture in the world, through which you see another world, another sun, and other skies.

They also remark, that the beauty of vegetable nature depends, in a great degree, upon an abundant supply of water; which, at the same time that it produces variety and contrast in the scenery, enriches the verdure of the lawns, and gives health and vigor to the plantations.

Their lakes are made as large as the ground will admit ; some several miles in circumference : and they are so shaped, that from no single point of view all their terminations can be seen ; so that the spectator is always kept in ignorance of their extent. They intersperse in them many islands ; which serve to give intricacy to the form, to conceal the bounds, and to enrich the scenery.

(To be Continued.)

REVIEW.

The Amateur Florist's Assistant in the selection and cultivation of Popular Annuals ; to which is added a descriptive catalogue of the more interesting tender Perennials used in decorating the Parterre, and a copious list of European Ornamental Alpine Plants.—By GEORGE WILLMOTT, 12mo., p.p. 76.

This is an exceedingly neat little work, and to persons desirous of information on the ornamental flowering annuals, it will be found interesting and useful. The author deserves the thanks and encouragement of the Florist for his efforts ; this will encourage him to give a little more practical information on the culture of some of the kinds treated upon in the present publication.

In the Preface the author observes that “the professional gardener and practical floriculturist are alike cautioned against expecting much more information from the following pages than, it is presumed, they already possess. The intentions of the author are more humble ; but he, fondly trusts, his exertions will not prove the less useful, his principal aim being to convey, in a comprehensive and cheap form, such a portion of that knowledge those already possess, as will enable the villa proprietor, cottager, and small garden occupier, to cultivate for their own recreation the *Popular Annuals*—a tribe of flowers, surpassed by no others in the vegetable kingdom, for fragrance, diversity of form, or beauty and variety of coloring—properties which are enhanced by the facility with which they may be grown, and the speedy return they yield to the careful cultivator ; for while they may be procured for a trifling amount, they at the same time require less attention than their more permanent congenitors ; and instead of waiting seasons, the owner is rewarded for the little requisite at-

tention bestowed on them in a few weeks, a period not only short, but rendered still more so by the pleasure experienced in daily beholding and contemplating their rapid progress, from the time their embryo leaves first appear, to that stage of existence when the profusion and loveliness of their bloom is sufficient to arrest the attention, and call forth the admiration of the most careless observer of nature's beauties.

From those resident in and near large towns, the Annual Flowers have a double claim to attention; for, while they in summer serve to cover the small street-door parterre, and garnish the window-box and flower-pot with the most choice embellishments of the flower-garden, in winter the management necessary for perennials, is dispensed with, which in such localities, is peculiarly unpleasant, and the gloomy association of ideas is avoided, consequent on daily beholding, in the herbaceous tuft of sickly leaves or withered flower-stalks, and the foliage-strip branches of the deciduous, or the smoke-blackened leaves of the evergreen shrub, the decay of what once charmed the eye of the beholder.

In addition to the Annual flowers, strictly so called, "which bloom and die in one short summer's space," there is another class of plants which annually compensate, by the beauty and delicacy of their bloom, the care necessarily bestowed on them by those who have in their gardens a small hot-bed frame or greenhouse, in propagating them in autumn, preserving them through winter, and re-transplanting them in May—again to embellish the flower-beds with borrowed brilliancy of warmer climes and clearer skies. To assist in the selection of these, the author has added a descriptive catalogue of the more interesting Tender Perennials used in decorating the parterre; and in conclusion, he has appended a copious list of the Ornamental European Alpine Plants, the smaller of which may be grown in pots, and protected during winter under glass, in what is usually termed a cold frame; while the taller and more vigorous may be grown in the open flower-border or verge of the shrubbery.

Culture of Annuals. In the course of the work the author has endeavoured to give directions for the culture of such as require any particular mode of treatment; in addition to which he considers the following general observations necessary for the guidance of the less experienced amateur.

The most natural period of sowing Annuals is in the latter end of autumn, when they, as well as most other plants, burst from their capsules, and distribute the seeds in various ways; therefore, those that are natives of this country, or similar climates, may in part be sown at that period, for forming an early bloom in the following summer, to be succeeded by the part reserved for spring sowing, which is the period most usually devoted to that purpose. From the end of February to the beginning of May flower-seeds may be sown, whenever the weather is favourable, and the ground in a proper state for that purpose; reserving the more tender sorts till about the middle of April.

The depth of soil used as covering for the seeds, should, in all cases, be apportioned to their size, for instance, Lupins, Sweet Peas, and similar large seeds, should be buried two or three inches under the surface; while Prince's Feather, Mimulus, Poppy, Tobacco, &c., of which the seeds are very small, should not be covered by more than a small layer of earth. It should further be kept in view, that seeds generally, and in particular those of a small size, vegetate more freely in a light than in a heavy and tenaceous soil; therefore, in cases when the former does not naturally exist, cultivators will find their additional toil amply repaid by procuring and only using light soil for covering the flower seeds.

The manners of sowing vary according to the taste of the operator: the practice formerly adopted, and still often followed by gardeners and others, is to form with the fingers, in the previously prepared ground, a circle from one-half to three feet in diameter, and of the proper depth, in which the seeds were deposited, and the earth again returned; the whole being generally finished by clapping the surface gently with the back of a spade, or pressing the earth lightly with the foot, to assist in keeping out the drought; of course the same practice of forming the reservoir for the seeds may be adopted whether the figure is intended to be a circle, a square, or any other form.

Some fanciful growers form the letters of their name, outlines of animals, &c. in their flower beds, generally choosing for such purpose plants as possess dwarf or compact habit of growth.

The young Annuals, as well as other plants, when coming above ground, are liable to be destroyed by slugs and various insects, as well as injured, particularly the less hardy sorts, by the night frosts; to prevent which, various methods are recommended and practised. In small gardens a very excellent plan is to sow the seeds in circles, not more than six inches in diameter, and inverting a flower-pot; when the young plants appear above ground, the flower-pot should be gently raised on one side by means of a small wedge or stone, which should always be removed in the evening, the operator taking care to lift it to see that no enemies are enclosed. The flower-pot answers the double purpose of protecting the young plants, and of retaining the moisture about them until they acquire sufficient strength to resist all such injuries. Lime water, applied at any time, proves destructive to slugs, but if sprinkled on the leaves during dry weather or hot sun, it will injure them; therefore, that expedient should only be resorted to in the evenings or during damp weather, when they have left their retreats. A sprinkling of quick-lime in the same manner is productive of the same effect, but always produces a disagreeable and unsightly appearance."

(To be continued.)

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

HOYA CORIACEA. Thick-leaved Hoya.

(Bot Reg.)

ASCLEPIADACEÆ. PENTANDRIA DIGYNIA.

1. A scarce plant, requiring the temperature of the stove, and to be grown on the trunks of trees. Those of our readers unacquainted with the genus will, perhaps, understand us better by saying, that this is a sort of honey plant, familiar to most persons, with its waxey white flowers, and often grown in windows. The *Hoya coriacea* appears to be a thicker foliaged plant, stronger in its stem, and perhaps less inclined to become a twiner or creeper than the common honey plant.

This new *Hoya* flowered for the first time in this country in the stoves of Messrs. Loddiges, of Hackney. It is a native of Manilla, and was sent home by Mr. Cunningham. Its flowering season is August.

ARISTOLOCHIA HYPERBOREA. Northern Birthwort.

(Pax. Mag.)

ARISTOLOCHIACEÆ. GYNANDRIA HEXANDRIA.

2. This is a curious and beautiful plant, supposed to be a native of the northern district of India. In this country it requires the temperature of the stove. It has been cultivated for some time in the collection of Mr. Knight, of the King's Road, Chelsea, where it flowered during the past year. It is a twiner, running to a considerable length, the foliage, heart-shaped, and the flowers somewhat resemble the singular form of the pitcher plant, but having a long and curiously formed lip, are of a yellow and brown colour. We have known several species of this genus requiring the temperature of the stove, but have always found them exceedingly difficult to bloom.

GALACTODENDRON. UTILE. Palo de Vaca ; or Cow Tree of the Caraccas.

(Bot. Mag.)

URTICÆ.

3. M. de Humboldt was the first to bring the Cow Tree of Caraccas, into notice. "We returned," he says, in his valuable Work, "from Porto Cabello to the valley of Aragua, stopping at the plantation of Barbula, through which the new road to Valencia is to pass. For many weeks, we had heard a great deal of a tree, whose juice is a nourishing milk. The tree itself is called the Cow Tree, and we were assured that the negroes on the farm, who are in the habit of drinking large quantities of this vegetable milk, consider it as highly nutritive ; an assertion which startled us the more, as almost all lactescent vegetable fluids are acrid, bitter, or more or less poisonous. Experience, however, proved to us during our residence at Barbula, that the virtues of the Cow Tree, or Palo de Vaca, have not been exaggerated. This fine tree bears the general aspect of the Star-Apple Tree ; its oblong pointed, coriaceous, and alternate leaves are about ten inches long, and marked with lateral nerves, that are parallel, and project beneath. The flower we had no opportunity of seeing ; the fruit is somewhat fleshy, and contains one or two kernels. Incisions, made in the trunk of the tree,

are followed by a profuse flow of gluey and thickish milk, destitute of acridity, and exhaling a very agreeable balsamic odour. It was offered to us in calabashes, and though we drank large quantities of it, both at night and before going to bed and again early in the morning, we experienced no uncomfortable effects. The viscosity of this milk alone renders it rather unpleasant to those who are unaccustomed to it.

"The negroes and free people, who work in the plantations, use it, by soaking bread in it made from maize, manioc, aropa, and cassava; and the superintendant of the farm assured us, that the slaves become visibly fatter during the season when the Palo de Vaca yields most milk. When exposed to the air, this fluid displays on its surface, probably by the absorption of the atmospheric oxygen, membranes of a highly animal nature, yellowish and thready like those of cheese; which, when separated from the more watery liquid, are nearly as elastic as those of caoutchouc, but in process of time exhibit the same tendency to putrefaction as gelatine. The people give the name of cheese to the curd which thus separates when brought into contact with the air, and say that a space of five or six days suffices to turn it sour, as I found to be the case in some small quantities that I brought to New Valencia. The milk itself kept in a corked bottle, had deposited a small portion of coagulum, and far from becoming fatid, continued to exhale a balsamic scent. When mingled with cold water, the fleshy fluid coagulated with difficulty; but contact with nitric acid produced the separation of the viscous membranes.

"I own that among the great number of curious phenomena which offered themselves to my notice during my travels, there was hardly one which struck my imagination so strongly as the sight of the Cow Tree. Every thing which relates to milk—all which regards the Cerealia, inspires us with interest, which relates not solely to the physical knowledge of things but seems to be allied to another order of ideas and feelings. We can hardly suppose that the human race could exist extensively without some farneaceous substances, any more than the protracted weakness of the human nursling can be supported without the nutritive fluid of its mother's breast; and to this conviction is attributable the religious kind of reverence with which the amylaceous matter of the Cerealia has been regarded by people both in ancient and modern times, as also the feelings with which we gazed upon the stately tree that I have now described. Neither the noble shadowy forests, nor the majestic current of rivers, nor the mountains hoary with sempiternal snows,—none of these wonders of tropical regions, so rivetted my gaze as did this tree, growing on the sides of rocks, its thick roots scarcely penetrating the stony soil and unmoistened during many months of the year by a drop of dew or rain. But dry and dead as the branches appear, if you pierce the trunk, a sweet and nutritive milk flows forth, which is in greatest profusion at day-break. At this time, the blacks and other natives of the neighbourhood hasten from all quarters, furnished with large jugs to catch the milk, which thickens and turns yellow on the surface. Some drink it on the spot, others carry it home to their children; and you might fancy you saw the family of a cow-herd gathering around him and receiving from him the produce of his "kine."

Incited by this interesting narrative, by the chemical.

Sir Robert Ker Porter's drawing was accompanied by well dried specimens of the foliage, and by the following interesting particulars in a letter, dated Caraccas, June 8, 1837. "I had the pleasure of acknowledging the receipt of your letter of August (1836) on the 16th of the following November; but from great occupation in my official business, I had not a single day to spare that might enable me to satisfy yourself, and two or three other lovers of botany, relative to the Milk Tree. I have, however, made an excursion into the mountains, some fifty miles distant from this city, (about three leagues from the coast, not far from the town of Coriacao, and after extreme pedestrian labour up the steep forest-covered face of the mountain, reached the spot where the Palo de Vaca grows. I assure you that the sight of this

extraordinary tree fully repaid me for the fatigue and severe wetting I experienced. The close of last month was the period of my visit ; but unfortunately, it did not prove that either of its flowering or fruit ; however, I have sent you a bottle of the milk ! some specimens of the leaves (as well preserved as circumstances would permit ;) a piece of the bark, and a sketch copied from that which I took at the time. I should think the elevation above the level of the sea where this tree grows, cannot be less than four thousand feet, and the temperature at eight o'clock under its spreading branches was 70 degrees Fahr. The forest was so densely thick and untravelled, that the people who accompanied us were obliged, at almost every step, to cut away for us through it with their sword-like knives, while the excessive steepness and slippery state of the mountain rendered our advance both tedious and dangerous. However, after a couple of toiling days, we reached the group of sought-for trees, surrounded in all directions by others no less wonderful to look upon than themselves. The natives lost no time in making a deep incision into the bark of one, down to the very wood, from which burst forth the Milk, white and limpid as that of the cow, sweet to the palate and accompanied by an aromatic smell, but leaving a strong clamminess on the lips, and upon the tongue, a slight bitter. In a quarter of an hour, we filled two bottles with the produce of a couple of trees ; for as our visit happened to be made during the wane of the moon instead of its increase the lacteal fluid did not flow so freely as it is said to do when drawn during the latter-named stage.

" The trunk of the Palo de Vaca from which the drawing was made, measured somewhat more than twenty feet in circumference at about five feet from the root. This colossal stem ran up to a height of sixty feet, perfectly uninterrupted by either leaf or branch ; when its vast arms and minor branches, most luxuriantly clothed with foliage, spread on every side, fully twenty-five or thirty feet from the trunk, and rising to an additional elevation of forty feet, so that this stupendous tree was quite a hundred feet high in all. I saw others still larger : but the state of the weather drove us from our position. The leaves, when in a fresh state, are of a deep dark and polished green, nearly resembling those of the Laurel tribe, from ten to sixteen inches long, and two or three inches wide. The specimens sent, will enable you to form a botanical description of the foliage, as the portion of bark will do of that part of the tree ; the wood, forming the body of the trunk, is white, very close-grained and hard, resembling the box-wood of Europe. The soil which these trees inhabit is dark and rich, and must be damp or very wet all the year round.

" I have been promised by one of the Indians who accompanied me that he would keep a look out for the fruit of the tree and send me some, when I shall have the satisfaction of forwarding a few specimens to you. But, with regard to the flower, or the flowering season of the tree, I have made enquiries over and over again, from persons who reside in the vicinity of other trees of the kind, in different parts of Venezuela ; but they tell me that no one ever saw or heard of the Cow Tree flowering.

The imaginary statement of the tree not flowering may be accounted for by the nature of the blossoms, being in all likelihood small and inconspicuous, as in so many of the Urticæ, to which Nat. Order it is probably correctly referred : though whether it be a true *Brosimum* as Mr. Don is inclined to suppose, or a new Genus, as Humboldt has suggested, must yet remain a doubt. The leaves are large and handsome, and of a rich and somewhat velvety green hue. The fruit had the outer coat so much broken, that I will not venture to describe what is as faithfully represented as the nature of the specimens would allow. The bark of the larger branches is singularly yellow, as shown in our figure.

Large Silver.—Messrs. Pince and Co., *Cephalotus follicularis*.
 Large Silver.—Messrs. Pince and Co., *Erica Elegans*.
 Large Silver.—Messrs. Vetch, *Chorizema Varium*.
 Silver Knightian.—Messrs. Rollinson, *Oncidium divaricatum*.
 Silver Banksian.—Ditto Ditto, *Cattleya forbesii*.
 Silver Knightian.—Mr. Dunsford, *Doryanthus excelsa*.
 Silver Banksian.—Mr. Pratt, *Rhododendron species*.
 Silver Knightian.—Mr. Lane, *Azalea Indica Variegata*.
 Silver Knightian.—Mr. Douglas, *Zetopia Specissima*.
 Silver Banksian 1.—Mr. G. Mills, *Clematis Sieboldi*.
 Silver Banksian 2.—Mr. G. Mills, ———— *Auzurea grandiflora*.
 Silver Banksian 3.—Mr. G. Mills, *Fuchsia fulgens*.
 Silver Banksian.—Mr. Redding, *Tropaeolum tricolorum*.
 Silver Knightian.—Mr. Lane, Seedling *Amaryllis*.
 Silver Knightian.—Mr. Mills, *Hydrangeas*.
 Silver Banksian.—Mr. Henderson, *Cineraris*.
 Silver Knightian.—Mrs. Lawrence, *Thunbergia Newtoniana*.
 Silver Knightian.—Messrs. Vetch, *Azalea Indica Plena Rubra*.
 Silver Banksian.—Mr. Lane, ———— *Laleritia*.
 Silver Banksian.—Mr. Halley, *Pernia Arborea Victoria*.
 Silver Banksian.—Messrs. Pince and Co., *Rhododendron Victoria*.

The show of greenhouse and other rare plants were very numerous and especially fine; there were many specimens exhibiting very considerable skill in their culture, and reflected great credit on the parties who superintended their management. The plants very far exceeded all that we ever saw at any exhibition in the country, and were well worth the coming a few hundred miles to see.

We had not time to take down the names of every specimen, as the pressure of spectators was generally so great, as to preclude our standing long enough to enable us to do it, but among the many novelties and beauties, we noted down the following:—

Pelargoniums.—The entire lot exhibited were of superior growth, each person exhibited twelve plants, and duly to appreciate the excellence of the specimens can only be done by seeing them. The winning specimens were fine in the extreme. They were plants struck in the autumn 1837, and now formed bushes about two foot and a half high, and three in diameter over the heads clothed in most vigorous foliage quite down to the edge of the pot on every side, so that not a stem could be seen, and these well-grown plants were profusely clothed with flowers of extraordinary size and beauty. The method of management we will give in a subsequent number.

The first twelve we noticed was that of Mr. Gaines of Battersea, who had the gold medal awarded for them, and to which he was justly entitled. They consisted of the following kinds. Criterion, Gaines's King, Gaines's Conqueror, Magnet, Pictum, Gauntlett, Lady Dillon, Dennis's Perfection, Lord Byron, Lady Denbigh, and Duchess of Roxburgh.

Those of Messrs. Colley and Hill, were the following:—Diadem, Louis Phillippe, Climax, Duchess of Sutherland, Pictum, Herculianum, Maid of Athens, Fosteri Rosea, Gem, Beauty of Ware, Dennis's Perfection, Lady Mary.

There were fine specimens of the following new or rare plants, viz.

Indian Azaleas.—Smith's Triumphans, fine rose, upper part crimson and spotted, fine formed flower.

Ditto. Smith's Grandiflora novae, rosy purple, a very large flower.

Ditto. Smith's Bella, fine pink.

Ditto. Smith's Coccinea superba, scarlet, upper part tinged with purple, fine flower.

Ditto. Smith's Seedling, very fine purple and pink.

Ditto. *Speciosissima*, rosy-crimson, slightly spotted, plant eight feet high, in profuse bloom.

Ditto. *Speciosa*, pink.

Ditto. *Rubra plena*, a double flower of a fine light-red colour, from Mr. Veitch, Exeter.

Ditto. *Purpurea splendens*, a fine bright purple flower, from A. Palmer, Esq., a very striking variety.

Ditto. *Monstrosum*, (Smith's) lilac tinged with purple, a very large flower.

Azalea rubra. A plant in profuse bloom, twelve feet high.

Ditto *variegata*. Centre of flower flesh colour, with an edge of white, by J. H. Palmer, Esq.

Ditto *sinensis*. A plant six feet high, clothed with its deep golden yellow flowers, by Mr. A. Stewart, Salthill.

Rhododendron hyacinthiflora. Purple flower nearly double.

Ditto. *Multi-maculata*, (Smith's) white, upper petals, slightly tinged with blush, and spotted with dark brown.

Thunbergia Hawthorneana. Blue, having a white centre, with the throat streaked with yellow.

Lobelia ramosa. Four feet high, with numerous branches in profuse bloom, deep blue flowers, yellow spot at centre, about one inch across.

Lophospermum rosemarinifolia. With narrow leaves and fine rose-coloured flowers.

Chorizema spartoides. With narrow leaves, but not yet bloomed.

Pimelea incana. The foliage has a silvery appearance, being densely clothed with hair. The flowers are terminal heads, white.

PELARGONIUMS.—Descriptions of the most superior kinds of *Pelargoniums* now in cultivation, as recently seen in the metropolitan nurseries:

Phosphorus, rosy purple, round and large petals.

Louis d'elyte, fine large rose, large dark spot on upper petal.

Louis Quartoize, white, with very large dark crimson purple spot, very superior.

King, (Gaines's) very beautiful rosy crimson, lighter towards the centre, the form of the flower is very perfect and large.

Lady Dillon, upper petals rose, lower lilac, large flower.

Bellissima, white, with large dark crimson spot, no streaks upon the flower.

Duchess of Roxborough, very fine rose, with large dark spot, a large and superior flower.

Fosterii Rosea, with large dark spot, a large flower of very fine form.

Faunus, lower petals a rosy pink, upper ones crimson with dark spot, a fine flower.

Sir John Sebright, lilac, with very large dark crimson velvet spot, a fine flower.

Chefe d'œuvre, white with large reddish spot.

Bleda, fine rosy crimson, with large crimson spot, large flower.

Perfection, (Garth's,) lower petals, flesh colour, upper ones rose with dark spot, a fine formed large flower.

Touchstone, fine scarlet, about the size and form of the well known *Daveyanum*.

Rose Eclatante, lower petals rosy purple, upper ones, rosy crimson, with a large dark spot.

Mrs. Norcliffe, white, with large dark crimson spot.

Gauntlett, lower petals light crimson, upper ones fine scarlet crimson, a large flower.

Criterion, white, with large dark spot, fine flower.

Lord Byron, rosy purple, with large dark spot, very fine formed flower.

Pictum, white, large spot, and upper petals streaked.

Aletia, white, tinged with blush, rosy crimson spot.

Colossus, lower petals rose, upper ones crimson with dark spot, good formed flower.

Climax, lower petals rose, upper ones bright rose with dark spot.

Conqueror, rosy purple with large dark spot, large and fine flower.

Maid of Athens, lower petals pink, upper ones fine rose with large dark spot.

(To be continued.)

REFERENCE TO PLATE.

HOVEA FUNGENS.—This very beautiful flowering species we saw in bloom at Messrs. Rolliesson's of Tooting, and they have informed us it had been received by them from Baron Hagel of Vienna. It is a native of South Australia, and is a most charming addition to our greenhouse plants. All the species delight in a very free drainage, light and airy situation, and to be grown in a compost of loam and sandy peat. The present species appears to be of a more bushy habit than any other of its family, but blooming so profusely, renders it very showy.

CONVOLVULUS PENTANTHUS.—This is a peculiarly neat and pretty flowering climber, we saw it in profuse bloom at Mr. Groom's, in his plant stove, and at the Hammersmith Nursery, in the plant stove. It appears, however, that it would do well in a greenhouse or conservatory during summer, but of course would bloom a little later than in the stove. The plant grows very rapid and blooms for several months very profusely. We procured a number of plants a few weeks back, and found it flourish with the greenhouse, treatment so far.

AMPHICOME ARGUTA.—We procured several of this very handsome flowering plant some time back, and consider it one of the best additions in new plants that have recently been introduced. Seeds of it were sent by Dr. Royle to the London Hort. Society, they had been collected on the Himalayah mountains. The plant has been distributed extensively by the Society. The plant is of a very pretty habit in its growth and foliage, and blooms very freely. It has been usually grown, since its introduction, in the greenhouse, but it is considered to be hardy, growing near a yard high, and blooming freely in the open ground during summer. The plant is an herbaceous perennial, and deserves a place in every greenhouse or flower border.

CHORIZEMA RUSCIFOLIA.—This very pretty flowering species has recently been introduced into this country by Mr. Groom, of Walworth. We saw it in bloom this spring; it is a very pretty species, and well deserves a place in every collection. In habit and flower it approaches nearest to *Chorizema Dickinsonii*; it is of a dwarfish habit, and blooms at the extremity of every strong shoot.

RHODODENDRON OSBORNII.—This very fine flowering Rhododendron has been raised in the nursery of Messrs. Osborn & Co., Fulham, near London. We saw its splendid bloom in May, and consider it very far to exceed all others of its class in this country. It deserves to be in every collection, but we suppose it will not be sent out before the next season. When ready for sale, it will be announced.

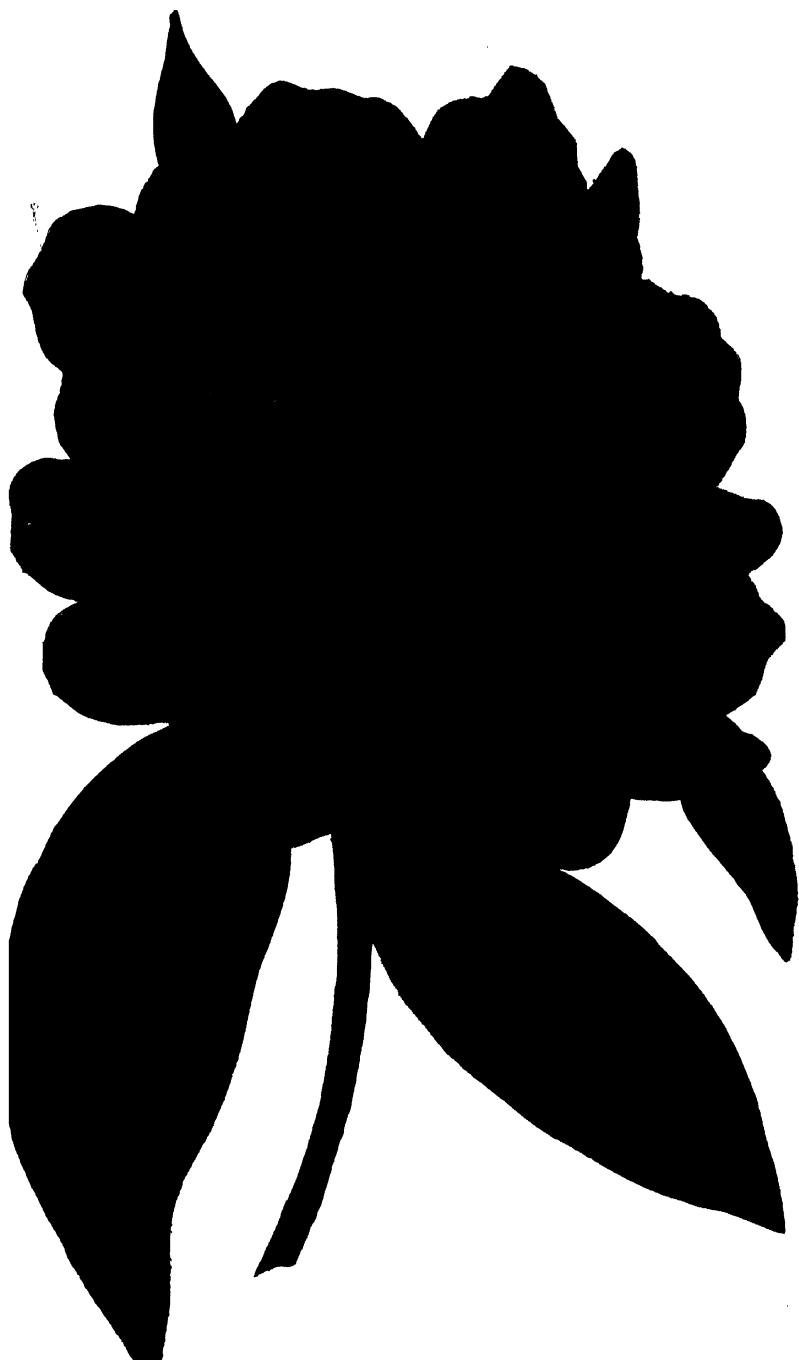
FLORICULTURAL CALENDAR FOR JUNE.

Take up the remaining tuberous root, such as *Anemone* and *Ranunculus* finishing by the end of the first week; fill up their places and any vacancies that have occurred, with annuals from the reserve ground. Propagate herbaceous and other plants that have gone out of flower, by means of cuttings and slips; also roses and American shrubs, by laying, budding, or cuttings.



Ipomoea pes-caprae

Ipomoea pes-caprae



THE FLORICULTURAL CABINET,

AUGUST 1st, 1839.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE PLEASURE AND PROFIT ARISING FROM CULTIVATING PLANTS AND FLOWERS.

BY MR. W. WOODMANSEY, HARPHAM, NEAR BRIDLINGTON, YORKSHIRE.

IT was a saying of the celebrated STERNE, "that most people have their hobby-horses;" the literal meaning of which I take to be, that most people have their favorite pursuits, or amusements; and so long as these pursuits or amusements, are compatible with our duty to God as Christians, and militate not against the welfare of our fellow men; so far are they innocent, rational, and profitable. Among all the various amusements which this fascinating world holds out, I think none is more innocent, more rational, or more profitable, than the cultivation of flowers: those beautiful gems with which our divine Creator has studded our meadows, and kindly furnished to beautify our gardens; whose brilliant colors vie with the rainbow, and infinitely surpass the most costly tints, and whose balmy fragrance scents the surrounding atmosphere with perfumes more agreeable than the spices of Arabia! Who can behold their exquisite symmetry? Who can admire their diversified yet splendid colors? Or, who can feast his senses on the aromatic sweets which emanate from their beautiful blooms, without feeling a sort of sacred pleasure stealing imperceptibly into his very soul, and leading its finest feelings willing captives to their inimitable charms?

It is said, and very truly too, that the study of Astronomy, that sublime science, which teaches the various revolutions of those

spheres which nightly bespangle the nocturnal heavens, is admirably calculated to lead the mind from Nature up to Nature's God. And if the contemplation of those luminaries, placed as they are at such immeasurable distances; and which can act only upon the ocular nerves, has this tendency; how much more ought the beauties of Flora, producing as they do, a threefold evidence on the senses? Yes—

The blushing tint, the crimson streak,
The powers of heavenly wisdom speak;
And all their balmy fragrance join,
To show their Author is divine.

In fact, there is not a blade of grass, or a wild flower that decks our lawns; but which is replete with instruction, and shows forth the handy-work of the great and glorious Creator of the Universe.

“Not a tree,
A plant, a leaf, a blossom, but contains
A folio volume. We may read, and read,
And read again, and still find something new—
Something to please, and something to instruct
E'en in the noisome weed.”—HURDIS.

Solomon, the wisest man, was a great admirer of the beauties of the floral kingdom. And our blessed Redeemer expressly commands us to “Consider the lilies of the field;” and if, with an example like that of Solomon before us; and after receiving a command from our Saviour himself, we can still remain insensible to their charms—still refuse to contemplate their inimitable beauties, we must lack much of that spirit of refinement which purifies the grossness of depraved human nature, and makes man fit for the society of Heaven.

“The men
Whom nature's works can charm, with God himself
Hold converse: grow familiar day by day,
With his conceptions; act upon his plan;
And form to his, the relish of their souls.”—AKENSIDE.

Among all the productions of the vegetable kingdom, there is not a single individual, but which has its uses; even those very tribes which daily remind us of man's awful fall, and the curse

pronounced upon the earth for his sake; have in them properties of peculiar usefulness, and prove beneficial to the wants of man.—God hath made nothing in vain!—some are for use, others for ornament, and not a few, perhaps all, are possessed of medicinal properties. Properties! without which, life itself would be a burden; and which, if utterly deprived of, it would be utterly impossible for man to exist.

Since then, there is such innocent amusement, such rational pleasure, and such mental improvement in the cultivation of plants, and flowers: and since it is so well calculated to enhance our spiritual interests; and render us more fitting for the society of beings of a higher order than ourselves, and especially for the society of our divine Maker. Let me, for one, disdain more ignoble and trifling pursuits. Let me fly from the deluded votaries of mere sensual gratifications, and in

“ The calm retreat!
 (Far from the noisy haunts of sordid men,)
 Where Flora trains her lovely offspring up,
 To captivate and charm! there let me muse!
 Surrounded by her rich and dazzling train,
 Till lost in ecstasy, my soul takes wing;
 And soars from nature up to nature's God!
 There may I lie, wrapped in the flowery vest
 Of silent rapture, till my soul breaks forth,
 And in the language of the immortal bard,
 Who sung the fatal fall—transported cries,
 ‘These are thy glorious works, Parent of good!
 To us invisible, or dimly seen
 In these thy lowest works; yet these declare
 Thy goodness beyond thought, and power divine!’ ”

July, 1839.

ARTICLE II.

REMARKS ON THE CYPRESS.

(Continued from page 154.)

THE ancients, who had great faith in balsamic scents, supposed therefore that the cypress improved the air by its transpiration; and on which account, the eastern physicians sent all those who had pulmonic disorders to the Isle of Candia, where these trees

abound ; and we are assured, that the aromatic smell of this ever-green was found to be a specific for the lungs.

It is clearly ascertained, that trees correct a putrid bad air. It should, therefore, be our study to find out those that do it most powerfully ; and having ourselves so often been revived and refreshed by the natural perfumes of the garden and fields, we deem it worthy the labours of medical students, to learn how far aromatic and balsamic scents may be good for those who are troubled with weak lungs.

By whom the cypress tree was first introduced to England, and at what exact period, we are not able to learn ; but it is probable, that we are indebted for this celebrated tree to some pious abbeſs or holy fathers of Sion Monastery, near Brentford, which is now become Northumberland's ducal palace ; as Dr. Turner tells us, in his Herbal of 1568, " it groweth right plenteously in the gardine of Sion." Gerard notices, in 1597, " that it groweth likewise in diuers places of Englande, where it hath beene planted, as at Sion, a place near London, sometime a house of nunnes ; it groweth also at Greenwich, and at other places ; and likewise at Hampstead, in the garden of Master Waide, one of the clarkes of hir maiesties privy-counsell."

Evelyn says, in 1664, " the cypress tree was, but within a few years past, reputed so tender and nice a plant, that it was cultivated with the greatest care, and to be found only amongst the curious ;" whereas we see it now in every garden, rising to as goodly a bulk and stature as most which you shall find even in Italy itself. For such I remember to have once seen in his late Majesty's gardens at Theobalds, before that princely seat was demolished. The author of the Sylva strongly recommends the planting of this tree in England ; and of its hardiness he says, " the March and April winds (in years 1663 and 1665), accompanied with cruel frosts and cold blasts, for the space of more than two months, night and day, did not, amongst near a thousand cypresses growing in my garden, kill above three or four, which, for being very late cut to the quick, (that is, the latter end of October), were raw of their wounds, took cold, and gangreened." From this and other recommendations of Evelyn, we presume it became fashionable to cultivate the cypress, for in 1706, when Loudon and Wise published "The Retired Gardener," they say, "cypress was formerly more in fashion than 'tis now ; for we see in some places whole alleys of it ; but these trees being apt to take

but one sort of figure, which is that of a pyramid, and the yew tree and pieca being more proper for the variety of forms of which they are susceptible, to adorn gardens, cypress has lately been neglected, and the other two trees been more planted." Thus it is evident that the cypress was driven out of the garden by the shears, whose business it was to disfigure nature, by transforming evergreens into urns, sugar loaves, extinguishers, and a thousand other whimsical devices, as suited the taste of the owner, or the ability of their gardeners, who have not been improperly called evergreen tailors. But the cypress may now safely return to its station in our plantations, since the shears have left the grove, and are now as busily employed in disfiguring the human shape, as they were formerly in mutilating vegetable beauties.

There is no part of ornamental planting more difficult than the distribution of evergreen trees, which are either the most permanent beauties of the grove, or the most gloomy features, accordingly as they are dispersed. A plantation composed entirely of trees that are not deciduous, has an aspect so sombre, that the name of nevergreen may be more properly applied to them than that of evergreen; yet they cheer our winter scenes most beautifully when happily blended with those deciduous trees, whose colour and character assimilate best with them. But we are not admirers of that regularity and uniformity so often offensive to the eye in large plantations, where there is no deviation from the fir and the larch, unless where death has made a gap, when you are treated with a larch and fir through hill and dale to the end of the plantation.

The cypress seems admirably adapted to ornament those lawns which surround villas or lodges built in the Grecian style, and perhaps we have no tree that accords so well with stone or stuccoed edifices as the cypress; and even the temples of marble lose half their effect if surrounded by other buildings instead of being relieved by the foliage of trees. At the present time, the burial hill of Pere-la-chaise, near Paris, forms a most interesting picture, as the numerous and various formed monuments rise above the young *arbores vitæ* and cypresses, like a city of marble emerging from a forest, and from which, a friend observes, we may form a faint picture of the beautiful appearance of Constantinople from the Bosphorus; the hills on which that city stands being intermixed with white buildings and green foliage, which forms a spectacle not equalled in any other part of Europe.

We have two varieties of the common cypress, *sempervirens* the upright and the spreading, which the ancients distinguished as male and female trees; but the botanist will know by the class in which these trees are placed, that they are androgynous plants, viz. having male and female flowers on the same root. It appears that the ancients did not consider the seed of a tree to be a fruit, unless it was eatable; for Phocion, who was so celebrated in Athens for his private and public virtues, remarked to a young man who spoke with more vanity than good sense, "Young man, thy discourse resembles the cypress; it is large and lofty, and bears no fruit." What would this Athenian, whose virtues were as incorruptible as the cypress itself, say to some of our modern speeches and publications?

When we plant the cypress in the shrubbery, it should be correctly ascertained if it is the spiral or the spreading variety; for the former requires but a small space, and should be placed behind those flowering shrubs whose extending branches require such an addition: whilst the spreading cypress may wave its mournful branches over the daisy-pied lawn, or form a foreground to the pointed poplar. But it requires considerable ingenuity to place the cypress happily in our plantations; for in most situations its dark and slender head adds a gloom rather than cheerfulness to the scene, particularly in autumnal evenings; when either the sun leaves its last streak, or the rising moon sends a silvery stream of light down the dark foliage, which gives additional sombre to the shade, and a spectre-like appearance to the imagination of the gloomy mind.

The spreading cypress is by far the largest growing tree, and is the most common timber in some parts of the Levant. This, if planted upon a warm, sandy, gravelly soil, will prosper wonderfully; and though the plants of this sort are not so finely shaped as those of the first, yet they greatly recompense for that defect by their vigorous growth and strength, in resisting all weathers. This tree is very proper to intermix with evergreens of a second size next to pines and firs, to form clumps, in which class it will keep pace with the trees of the same line, and be very handsome. Besides, the wood of this tree is very valuable, when grown to a size fit for planks, which I am convinced it will do in as short a space as oaks; therefore, why should not this be cultivated for that purpose, since there are many places in England where the soil is of a sandy or gravelly nature, and seldom

produce any thing worthy cultivating? Now, in such places, these trees will thrive wonderfully, and greatly add to the pleasure of the owner while growing, and afterwards render as much profit to his successors, as perhaps the best plantation of oaks.”

Pliny tells us, that in Italy it was considered amongst their most profitable plantations, and was generally cut for poles once in every thirteen years, and that this fall was called *dos filiæ*, because the profit was reckoned a sufficient marriage portion for a daughter.

This timber is reckoned amongst the sonorous woods; it is therefore used for harps, violins, and other musical instruments, and it is said that no wood is better calculated to resist the ravages of the worm, &c.

The deciduous cypress tree, *cupressus disticha*, is a native of North America, and it appears to have been introduced to this country by Mr. John Tradescant, of South Lambeth, where it was planted prior to 1640. We have now two varieties of this species of cypress.

Cupressus lusitanica, commonly called the cedar of Goa, from whence it was first brought to Portugal, and is therefore named the Portugal cypress. We learn from Mr. Ray's letters, that this species of cypress was cultivated in England as early as 1683, but it is not considered so hardy as the common cypress, and is therefore less planted; formerly there were some of these trees growing in the Bishop of London's garden, at Fulham, and there was a fine tree of this species in the gardens of the Duke of Richmond, at Goodwood, near Chichester, which was killed by the frost in 1740.

The arbovitæ leaved cypress, or white cedar, *cupressus thyoides* is a native of North America, and Peter Collinson, Esq. had the honour of giving it British soil in 1736. This species grows naturally in China and Cochin-China; it loves a strong moist soil, and abounds in the swamps of New Jersey, and some parts of Pennsylvania and New York.

By AN HORTICULTURIST.

ARTICLE III.

ON THE CULTIVATION OF ERICAS.

(Continued from page 132.)

It is long been an opinion, that the *Epacris*, *Helichrysum*, and some other similar plants of the genera, enumerated at the commencement of this article, should not be taken out of the Greenhouse during summer, as the majority of plants are. This opinion is strengthened, by the success I have experienced, in a collection of about three hundred species of the best sorts, so managed under my own immediate charge, and much more so by observing the practice of those French and German cultivators who follow a similar plan, as well as that of the superior management of these plants in the Edinburgh botanical garden, where specimens are to be seen grown in tubs, from three to four feet in diameter, and the plants from eight to twelve feet in height. No cultivator has been so successful in this department as Mr. M'Nab, the intelligent curator of that garden, from whose valuable treatise on the subject we take the following quotation. "When I mention the treatment of heaths when in the house," he says, "I must let it be understood that if I had sufficient accommodation under glass, I never would take heaths out of doors, unless it were for the purpose of shifting, or taking them from one house to another. My practice would be to keep them in the house all summer, giving them plenty of air, and to keep them cool during winter. I know it is the common practice to turn heaths out of doors for four or five months in summer and autumn, and it is also a pretty general opinion that by doing so it makes them hardier, and enables them to stand the winter better than they would do if kept within doors during summer. From this opinion I must take the liberty of differing, as I know of no species of heath that will not bear as much cold in winter, without suffering from it if kept in the house during summer, as they do when turned out of doors, and many of them, (perhaps all), I know, will bear more cold in the winter. For, by the latter practice, the young wood gets better ripened, and better able to resist cold in winter." The same excellent authority, in speaking of plants in general, recommends, where there is sufficient accommodation, to keep all plants under glass during summer, and, in such cases, to allow them plenty of room, "for unless they are placed quite

separate, "he observes," from each other, so that a free circulation can pass among them, they will suffer much more when crowded in the house in the summer, than they will do in the same situation during the winter, for in winter they are in a more dormant state, and not growing with the same vigour. I would however advise every one to keep as many of their best specimens and best kinds within doors during summer as they can, without having them crowded together. I cannot give better directions than to say, that one should not touch the other when in the house in summer, and if the nearest part of one to the other is two or three inches apart, so much the better. The house, however, should be ventilated at all times, and, except in cases of high wind or heavy rain, both top and front lights should be kept open night and day; and besides watering the earth in the pots freely when they require it, they should be well watered over-head with the garden engine every day; and if the weather is hot and dry, this operation should be performed twice every day, namely, both morning and evening."

There is one branch of culture in which I differ from the talented writer above quoted; he recommends a partial degree of shade during the hottest days of summer. • In this particular the Messrs. Loddiges agree with me as do most of the continental cultivators. This however, may be less important in the latitude of Edinburgh than in that of London, and is certainly much less so there, than in most parts of France, or the south of Germany, and for that reason it may not be noticed in the excellent directions laid down by Mr. M'Nab. Messrs. Loddiges follow the continental fashion of shading by means of long slender branches of birch or other deciduous trees, which are laid over the roof of the house, breaking the full force of the sun's rays, while at the same time air is not much obstructed. My practice is to shade by spreading netting over the roof, and latterly by having a fine thin canvass awning, mounted on rollers, on the top of the house, which is let down or taken up at pleasure.

Air cannot be too freely admitted to heaths, and indeed, to all similar plants, and to effect this the upright lights may be left open altogether, until the thermometer, in the open air, falls to two or three degrees below the freezing point; indeed, we have even had the mould in the pots frozen pretty hard without the application of fire heat. If the house be pretty air-tight and dry, fire heat will seldom be required; for we find by Mr. M'Nab, (*Treatise*, p. 31.

that he has had no accident in this respect when the thermometer out of doors indicated sixteen degrees of frost. The following quotation on this subject of temperature is so excellent that we are induced to give it at length.

“I have had all the heaths in the house frozen for days together, so hard that the pots could not be removed from their places without breaking them, and fresh air constantly admitted at the time, and I have never seen one of them suffer in the smallest degree from it; but, on the contrary, found them thrive better than under any other treatment.

“I have several times had the heath house in winter without fire heat, when the thermometer out of doors stood at sixteen degrees below freezing. But in these cases the house was always shut close, and I have never seen the heaths suffer from this cold. I would not, however, advise any person to risk his heaths in such a temperature until he had himself tried some experiments on the degree of cold which they will bear, and from that he will learn more than he could from volumes written on the subject; a very little observation will soon convince him that his heaths require but little fire heat during winter. I have already said that heaths suffer from too much artificial heat; and all that I have read on their cultivation seems to concur in this particular; but I am not aware that any one has pointed out what degree of heat or cold is injurious; and, indeed, I have only been able to ascertain this myself, to a very limited extent. The time, however, when these plants suffer most from heat is, when a sharp frost sets in, and no heat is applied till after the frost has taken effect in the inside of the house; then a fire is put on, and the frost is driven out. It is better, no doubt, in such a case, to keep out the thief if you can, but if once let in, keep him in, and never attempt to force him out. I know that heaths in the open air will not suffer when the thermometer stands four or five degrees below freezing; and we know also, that heaths, in the house in winter will bear the same degree of cold with impunity. Now suppose the thermometer out of doors to fall to twelve or fourteen degrees below freezing, and no heat in the heath house; the thermometer in the inside may then be four or five degrees below freezing.

(To be continued.)

ARTICLE IV.

ON THE CULTURE OF LILIUM JAPONICUM, &c.

BY W. GRIFFITH, ESQ., BAYSWATER.

I AM of opinion that with many plants they only display properties and beauties in proportion to the care bestowed in their cultivation, and this principle is of very extensive application. The Hydrangea, for instance, as it is seen in common-place culture is scarcely deserving of notice, but place it under favourable circumstances, and it becomes not only interesting, but even to a degree, beautiful.

I recently saw a number of plants at Gusmenbury Park, in so vigorous and healthy a state that I was quite struck with their beauty, among them was an equal proportion of fine blue and rose coloured heads more than a foot in diameter. The same might be said of many other old inhabitants of our gardens and green-houses, who, with every particular of beauty and elegance to recommend them, have been suffered to dwindle away, merely to allay a thirst for novelty ; I do not condemn the introduction of new plants, on the contrary, I would encourage it to the utmost, but I certainly do think that the indifference with which many plants are passed over merely because they are "old," is very much to be regretted.

It is my intention to describe the mode of culture by means of which I have grown the *Lilium Japonicum* L. longiflorum to state of great beauty. The mode of culture I pursue, is, when the leaves and seed (if any) are fully matured, water is gradually withheld till the plants are brought to a state of perfect rest ; this rest is indispensable in the cultivation of all bulbous rooted plants, as it tends to strengthen those properties which are to form the attractive beauties of the plant the succeeding season. The bulbs being thus matured are placed in pots in a cool dry situation beyond the reach of frost, where they remain till the middle of January. They are then brought into the greenhouse, and moderately supplied with water for a fortnight. By that time they are in a fit state to be re-potted, which is done in the following manner. The bulbs are taken out of the pots, and the dry mould and offsets carefully removed. They are then re-potted according to their size, the largest in pots six or eight inches in diameter. The soil I use is about half turfy peat, a quarter of sandy peat,

and a quarter of well-rotted cow-dung, not sifted but broken with a spade. After potting they are removed to the greenhouse; when water is supplied moderately till they begin to vegetate, it is then gradually increased at discretion.

By this mode of treatment, I have had flower stems five feet high, and in one pot as many as twenty flowers; their large pure white and lovely blossoms, so delightfully fragrant, amply repaid me for my trouble. The plants are well deserving a place in every greenhouse, being easy of culture and so strikingly and delicately beautiful.

ARTICLE V.

ON CHINESE GARDENS.

(Continued from page 158.)

SOME of these are very small, sufficient only to contain one or two weeping willows, birch, larch, laburnum, or some other pendant plants, whose branches hang over the water; but others are large, highly cultivated, and enriched with lawns, shrubberies, thickets, and buildings: or they are rugged, mountainous, and surrounded with rocks and shoals; being covered with fern, high grass, and some straggling large trees, planted in the valleys: amongst which are often seen stalking along the elephant, the tin-hyung or man bear, the rhinoceros, the dromedary, the ostrich, and the sin-sin or black giant baboon.

There are other islands, raised to a considerable height, by a succession of terraces, communicating with each other by various flights of magnificent steps. At the angles of all these terraces, as well as upon the sides of the steps, are placed many brazen tripods, that smoke with incense; and upon the uppermost platform is generally erected a lofty tower for astronomical observations; an elegant temple, filled with idols; the colossal statue of a god; or some other considerable work: serving, at the same time, as an ornament to the Garden, and as an object to the whole country.

They also introduce in their lakes large artificial rocks, built of a particular fine coloured stone, found on the sea-coasts of China, and designed with much taste. These are pierced with many openings, through which you discover distant prospects: they have in them caverns for the reception of tortoises, crocodiles, enormous water-serpents, and other monsters; with cages for rare

aquatic birds ; and grottos, divided into many shining apartments, adorned with marine productions, and gems of various sorts. They plant upon these rocks all kinds of grass, creepers and shrubs, which thrive in such situations, as moss, ground-ivy, fern, stone-crop, common house-leek, and various other sorts of the sedum, crane's-bill, dwarf box, rock roses, and broom ; with some trees rooted into the crevices : and they place on their summits, hermitages and idol temples, to which you ascend, by many rugged, winding steps, cut in the rock.

But far the most extraordinary, as well as the most pleasing of their aquatic constructions, are the Hwei-ta, or submerged habitations, consisting of many galleries, cabinets, and spacious halls, built entirely under water ; their walls are decorated with beautiful shells, corals, and sea-plants of all sorts, formed into many singular shapes, and sunk into various irregular recesses ; in which are placed, in due order, Fung-shang, God of the Winds ; Bong-hoy, Monarch of the Sea ; Shu-Kong, King of the Waters ; with all the inferior powers of the deep. The pavements are laid in compartments of jasper, agat, and madrepores of Hay-nang, of the many extraordinary kinds : the ceilings are entirely of glass, which admits the light through the medium of the water, that rises several feet above the summits of these structures ; the glass is of various bright colours, very strong ; and the different pieces, artfully joined, to resist the pressure of the fluid with which they are loaded. The use of these habitations, is the same as that of Miao-ting, before described : they are resorted to, in very hot weather, to feast and enjoy ; and it is singularly entertaining, in the intervals of pleasure, to observe, through the crystal ceilings, the agitation of the waters, the passage of vessels, and sports of the fowl and fishes, that swim over the spectator's heads.

On the borders of their lakes are seen extensive porticoes, and many detached buildings, of different forms and dimensions, accompanied with plantations, sea-ports with fleets of vessels lying before them, forts with flags flying, and batteries of cannon : also, thickets of flowering shrubs, meadows covered with cattle, corn lands, cotton and sugar plantations, orchards of various fruit-trees, and rice grounds, which project into the lakes ; leaving, in the midst of them, passages for boats : and, in some places, the borders consist of lofty woods, with creeks or rivers for the admission of vessels, whose banks are covered with high grass, reeds, and wild spreading trees, forming close gloomy harbours, under, which

the vessels pass. From these harbours are cut many vistas through the woods, to distant prospects of towns, bridges, temples, and various other objects, which successively strike the eye, and fill the mind with expectation; when suddenly a farther progress is rendered impracticable by rocks, strong branches, and whole trees lying across the channel; between which the river is still seen to continue, with many islands; whereon, and also in the water appear the remains of antient structures, monumental inscriptions, and fragments of sculpture: which serve to give an edge to curiosity, and to render the disappointment more affecting.

Sometimes too, instead of being intercepted in your passage, the vessel, together with the whole river, are, by the impetuosity and particular direction of the current, hurried into dark caverns, overhung with woods: whence after having been furiously impelled for some time, you are again discharged into day-light, upon lakes encompassed with high hanging woods, rich prospects on mountains, and stately temples, dedicated to Tien-ho, and the celestial spirits.

Upon their lakes, the Chinese frequently exhibit sea-fights, processions, and ship-races; also fire-works and illuminations: in the two last of which they are more splendid, and more expert than the Europeans. On some occasions too, not only the lakes and rivers, but all the pavilions, and every part of their Gardens, are illuminated by an incredible number of beautiful lanterns, of a thousand different shapes, intermixed with lampions, torches, fire-pots, and sky-rockets; than which a more magnificent sight cannot be seen. Even the Girandola, and illumination of St. Peter's of the Vatican, though far the most splendid exhibitions of that sort in Europe, are trifles, when compared to these of China.

At the feast of Lanterns, in particular, all China is illuminated, during three days: it seems as if the whole empire were on fire; every person lights up a number of painted lanterns, of various beautiful forms; sometimes of horn, glass, or mother of pearl, but most commonly framed of wood, carved, varnished and gilt, upon which is strained thin silk, painted with flowers, birds and human figures, that receive an uncommon brilliancy from the number of lights within: some there are likewise made like our magic lanterns, representing, by coloured shadows, ships sailing, armies marching, horses galloping, and birds flying; others are full of puppets, representing mountebanks, buffoons, boxers, wrestlers and dancers

which are moved by imperceptible threads, the actions being accompanied by the voice of the operator, modified in different manners ; all so conformable to the size and gestures of the figures, that they seem really to speak.

There are likewise lanterns made in the form of tigers, dromedaries, and dragons of an enormous size ; which are painted in transparency, and filled with lights : these are moved about the streets by men concealed within them, who artfully give to the machine every motion of the animal it represents ; others there are seen floating upon the lakes and rivers, built like boats and vessels of various kinds, or shaped like dolphins, alligators and porpuses, that swim and curvet upon the water ; others again that resemble birds fluttering amongst trees, or perched on the summits of the houses, on all parts of their temples, triumphal arches, and public structures of different kinds : in short, there is scarcely any form that can be imagined, which is not given to some of these lanterns ; all executed with the greatest taste and neatness, often at a very considerable expence ; some even to the amount of a thousand tael, or near three hundred and fifty pounds.

It is likewise upon this festival that the most splendid of their fire-works are exhibited ; it would be tedious to describe them particularly, as they resemble, in many things, our European ones ; but what is related on that head, by one of the missionaries, is curious, and may here be inserted, to give the reader an idea of Chinese skill, in works of this sort.

“ I was extremely surprized,” says the father, “ at a fire-work which I saw at Pe-king, representing an arbor of vines ; it burnt for a considerable time, without consuming ; the grapes were red, the leaves green, and the color of the stem and branches variegated, in imitation of nature ; all the forms were represented with the utmost precision, in fires of different colors ; the whole was executed with amazing art, and had the most pleasing effect imaginable.”

Their rivers are seldom straight, but winding, and broken into many irregular points ; sometimes they are narrow, noisy and rapid ; at other times deep, broad and slow. Their banks are variegated, in imitation of nature ; being in some places bare and gravelly, in others, covered with woods quite to the waters edge ; now flat and adorned with flowers and shrubs, then steep, rocky, and forming deep winding caverns, where pigeons of the wood, and water-fowl build their nests.

(To be Continued.)

REVIEW.

The Amateur Florist's Assistant in the selection and cultivation of Popular Annuals; to which is added a descriptive catalogue of the more interesting tender Perennials used in decorating the Parterre, and a copious list of European Ornamental Alpine Plants.—By GEORGE WILLMOTT, 12mo., p.p. 76.

(Continued from page 160.)

“Next to slugs, ear-wigs are usually the most pestiferous annoyance the flower-grower has to encounter; their ravages, however, are more confined to certain plants, and are experienced at a more advanced period of the season—generally when the plants are in flower, or nearly so. The best means of getting quit of them is to lay a few short reeds, pieces of rolled paper, &c. about the plants, in which they will take shelter during the night, and from whence they may be blown or shaken in a vessel of water in the morning.

The wire-worm is also very destructive to certain kind of Annuals, particularly French Marigolds, Stocks, China Asters, &c., and attacks them from the period of germination almost to the time of flowering. The hard skin by which this enemy is covered effectually protects it from injury by any application that will not prove injurious to the plant; therefore, the only means to entrap it is to supply it with more agreeable food, such as pieces of potatoe, carrots, &c., which may be sunk in the earth around it, near the plants, marking the place, so that it may be withdrawn and the worms picked out daily until extirpated. They are most prevalent in soils recently brought under cultivation, as old pastures, &c.; therefore, care should always be taken that they be not introduced among borrowed earth from such places.

The management of hardy annuals, after briarding, consists in thinning them out to proper distances, varying from two to six inches, or more, according to the sizes and habit of the plant; removing any decayed leaves or weeds, and supporting the weaker sorts by carefully tying them to neat stakes; the more, however, that this can be dispensed with the better, for plants never look so well as when left to assume their natural habits.

PRISMATOCARPUS Herit.	VENUS L.-GLASS.	Campan.	Pentand.	Monogynia.
1 hybridus Herit.	hybrid	P. 5..8	England	•
2 pentagonus Herit.	five-angled	B.p 5..8	Turkey	1686
3 speculum D.	common	P. 5..8	S. Europe	1596
albo	white	W. 5..8		
pallido	pale	Li. 5..8		
purpureo	purple	d.P. 5..8		

This genus is named, in allusion to the form of the fruit, from the words *P'risma*, a prism, and *carpos*, fruit, and chiefly consists

of hardy annuals, formerly referred to *Campanula*, of these the most interesting is No. 5, which, with, its varieties, are old and well-known inhabitants of the flower-garden—esteemed alike for their neat habits of growth and profusion of bloom. The name of Venus Looking-glass is supposed to have been applied to this species from the resemblance, that its corolla bears to the ancient form of a mirror, which was round; whence the astrological sign of Venus was made to represent a round mirror with its handle. The whole succeed in rich light soil; and the seeds, which are small, should, when sown, be sparingly covered with earth.

RESEDA L. MIGNONETTE. *Resedacæ. Dodecandria Trigynia.*
odorata L. sweet-scented St. 6..10 1 Egypt 1752

Derivation of generic name from the Latin *Resedo*, to calm or appease, the plant having been considered as efficacious in removing external bruises. The Mignonette is a well-known universal favourite, and occupies a prominent place in every flower-garden, where it is especially useful for growing under or amongst dahlias, and other showy flowers, which are either devoid of, or have a disagreeable smell. "The luxury of the garden says Mr. Curtis, (conductor of the Botanical Magazine bearing his name,) "is greatly heightened by the delightful odour which this little plant diffuses; and, as it grows readily in pots, its fragrance can be conveyed to the house." Its perfume, though not so refreshing as the Sweet-briar, is not apt to offend the most delicate olfactories. The Mignonette is also universally esteemed for growing in boxes or flower-pots, particularly in town windows; and, although generally treated as an annual, yet, if protected from frost, and prevented from flowering too profusely by pinching off about one-half of the flower-spikes, it will attain the size and habits of a shrub, and last for many years. Seeds may be sown in April; either in a hot-house to force it, or in the open border, where it will flower freely and ripen its seeds, by which it will perpetuate itself without further care than is necessary to clear the young plants from weeds.

RHODANTHE Ld. RHODANTHE. *Compositæ. Syngenesia Æqualis.*
Manglesii Ld. Capt. Mangles Ro. 6..9 1 Swan Riv. 1834

This genus according to Dr. Hooker, seems to be nearly allied to *Podolepis*, but differs in the form of the involucre; and has its name given in allusion to the beautiful rosy color of its flowers. The only known species is a very handsome annual, possessing the brilliancy of the Cape *Helicherysum*, but without the stiffness and formality of that plant. It can be brought to flower in the green-house, at almost any season of the year, by sowing the seeds about two months previous. It also thrives out of doors; where, however, the delicacy of its form does not appear to such advantage as when grown under glass; it should be sparingly watered, have a free circulation of air, and be grown in moderately-sized pots, well drained, and supplied with rich light soil.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

CALLICHROA PLATYGLOSSA. Golden Callichroa. (Bot. Mag.

COMPOSITÆ. SYNGENESIA SUPERFLUA.

1. This is an annual plant of moderate beauty, quite hardy, and nearly allied to *Doronicum*. The flowers are yellow, with deeply cut foliage.

EPACRIS IMPRESSA var. **PARVIFLORA.** Small flowered pitted *Epacris*. (Bot. Reg.

EPACRIDACEÆ. PENTANDRIA MONOGYNIA.

2. As the name implies, this is a variety of *E. impressa*, sent to this country by Mr. James Backhouse, who has been engaged for some years travelling on a benevolent mission in New South Wales. It is now suspected that the genus *Epacris*, especially the species *Impressa*, and others nearly related to it, are merely varieties of each other. In speaking of *E. impressa*, Mr. Gunn, a high authority on this genus, says, "the colours vary from a deep red through all the paler shades of blush to pure white, so that colour constitutes no distinction; the size is also variable." He distinguishes four chief varieties, viz.—1. Red flowering, tall; 2. Red flowering dwarf; 3 White flowering, tall; 4. White flowering, dwarf; in addition to which, many others might be named.

COOPERIA PEDUNCULATA. Pedunculated. (Bot. Mag. 3727.

AMARYLLIDÆÆ. HEXANDRIA MONOGYNIA.

3. A native of Texas; flowers, white with a tinge of green on the outside, it blooms during the night, and has a peculiar primrose fragrance; it appears to require a stove temperature.

CALADIUM PETIOLATUM. Long Stalked. (Bot. Mag. 3728.

AROIDÆÆ. MONÆCIA MONANDRIA.

4. Tubers of this singular looking plant were sent to this country by Mr. Boaltbee, Junr., from Fernando Po; the plant has bloomed in the collection of Joseph Boaltbee, Esqr., Springfield, near Birmingham. The tubers are similar to the potatoes in appearance, but are poisonous. The spathe is of a dark purple colour, and inside of it is a black purple; the anthers are of a pretty cream color.

BLETIA PARKINSONIA. Mr. Parkinson's *Bletia*. (Bot. Mag. 3736.

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

5. Introduced from Mexico by H. M., consul general, Mr. Parkinson, after whom it has been named. It is a very singular and distinct kind producing flowers much narrower than any other, and of a pale rose colour with the column and lip shaded yellow and purple. It is cultivated at Woburn Abbey, where it blossomed for the first time in January last, the treatment applicable to other species will also apply to this.

CEROPEGIA VINCÆFOLIA. Periwinkle leaved Ceropogia.

(Bot. Mag. 3740.

ASCLEPIADEÆ. PENTANDRIA, DIGYNIA.

6. A very distinct species of this singular genus was introduced from Bombay to the Glasgow Botanic garden, by J. Nimmo, Esq., Bombay, in the stove at which place it bloomed in September, 1838. The flowers are greenish white spotted with deep brown, and the upper part of the segments wholly brown.

CYNOGLOSSUM CŒLESTINUM. Blue and white Hounds-tongue.

(Bot. Reg. 36.

BORAGINACEÆ. PENTANDRIA, MONOGYNIA.

7. A pretty hardy biennial introduced to the Horticultural Societies' garden by J. Nimmo, Esq., where it bloomed in August and September last. The flowers which are blue and white, are smaller than other species of this genus.

DENDROBIUM JENKENSII. Captain Jenkinson's Dendrobium.

(Bot. Reg. 37.

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

8. This species bears resemblance to *D. aggregatum*, both in color and shape, but the flowers are larger. It was introduced into various collections in this country by Dr. Wallich, who received it in 1836, from Captain Jenkins, of Guatpara, to whom we have dedicated it. Dr. Lindley observes, "it is more difficult to cultivate than those kinds with long free-growing stems; it is frequently seen in an unhealthy state owing to its being grown in a pot, and subjected to an uniform high degree of temperature. The best way to ensure its success, is, to tie it to a block of wood with a piece of turfy peat attached to it, and suspend it from the rafter of the house, there it must be well syringed at least twice a day, so long as it continues to grow, and afterwards it may be removed to a cooler house. In fact, it never requires so much heat as those species with long trailing stems."

EDWARDSIA MACNABIANA. Mr. Macnab's Edwardsia.

(Bot Mag. 3735.

LEGUMINOSÆ. DECANDRIA, MONOGYNIA.

9. Sir William Hooker considers it probable that the present handsome species is a seedling variety of *E. grandiflora*, though it is at once distinguishable from the ordinary form of that species. Mr. Macnab of the Edinburgh Botanic garden, under whose directions it has been successfully grown for several years, confidentially believes it to be a distinct species; from whence it was introduced however is not known. The flowers, which are produced upon lateral racemes, are of a bright yellow. During the recent very severe winter, which effected so much ruin amongst our valuable shrubs; this beautiful plant survived much better than two or three other species about the same size and occupying similar parts of the wall; it has now a stem which measures upwards of eleven inches in circumference.

EPACRIS COCCINEUS. Scarlet-flowered Epacris.

(Pax. Mag. Bot.

EPACRIDACEÆ. PENTANDRIA, MONOGYNIA.

10. A very beautiful variety raised from seed by Mr. Kynoch, gardener to Alderman Copeland, Leyton, Essex, in whose collection it bloomed during the early part of this year, and was subsequently purchased by Messrs. Low & Co., of Clapton.

PART III.

MISCELLANEOUS INTELLIGENCE.

REMARKS.

ON FUCHSIA FULGENS.—This very splendid flowering species has become an object of general observation and attraction, so much so, that it is to be found not only in every floral exhibition of greenhouse plants, but obtaining a prize at each. The demand for the plant this spring has been much greater than last year, and so much so that nurserymen could not meet the demand.

The plant certainly merits a place in every greenhouse, conservatory, plant room, and flower-garden. It is a plant of the most easy culture, vigorous habit, and a free bloomer; some difficulty however has been found to keep the old stems alive through the winter, but this arises from the circumstance of the wood of the previous season not being well ripened, as in most instances small plants could be procured and that late in the spring of 1838. But where a strong plant was obtained, and that grown in a greenhouse, &c. so as to get the wood well ripened, such plants we have invariably observed have retained their branches as well as other woody plants, and we have seen plants in bloom this spring four and five feet high, clothed with numerous clusters of fine flowers at the ends of the lateral branches. Plants that are grown in the open border of a flower garden will rarely ripen shoots so as to endure through winter, but will generally perish; but if the plant be treated as is done with the Dahlia, Marvel of Peru, &c., it will be found to flourish, and be a highly ornamental plant either for a bed, or grown on a lawn, border, &c., as a single specimen. When the plant has ceased blooming in autumn the root should be taken up, keeping some soil adhering to it, pot it, and keep it from frost through winter: early in February following, the root should be placed in heat, it will soon throw up a number of shoots, one or more should be left at discretion, striking those taken off; and such a plant by the end of May would be fine to turn out, as is done with dahlias. A full grown leaf taken off with the bud at its base, inserted in sand, and placed in moist heat, will speedily strike root. In fact the plant is very easy of propagation by slips, cuttings, leaves, or division of the tubers.

CONDUCTOR.

ON HYBRID PLANTS, &c.—A regret has sometimes been expressed at the production of hybrid plants, because they introduce a certain degree of confusion and difficulty into our technical descriptions and systematic arrangements. But surely the searcher after truth, the philosophical investigator of the works of nature, must greatly rejoice at every fresh and striking result (however embarrassing for the moment), which has been obtained by the judicious application of a direct experiment. The more our experiments are multiplied, and the more precautions we take in securing the accuracy of our results, the greater will be our chance of detecting those physiological laws which regulate the variations and restrictions of forms in different species. One remarkable result observable in the production of hybrid plants is, the uniform manner in which several of them refuse to perfect their seed; and if this character were constant in them all, we should possess an excellent law for distinguishing hybrids from true species. But it is now asserted that

many hybrids do perfect their seeds ; still an obvious question presents itself, whether we ought not always to consider the parents of such hybrids really to belong to the same species, however dissimilar they may be in external form, whilst the parents of those which do not perfect their seed should be considered distinct. The evidence which is hitherto been adduced militates strongly against the existence of any such law ; though we may hardly allow it to be sufficiently complete and definite to have completely settled the question. Besides, the existence of certain hybrids which never produce ripe seed, and of others which readily produce them, there are some which occasionally, but rarely, do so : and such we find to be the case with the present plants. Professor Henslow examined a great many, of its ovaries in the Bury Gardens, last summer, in all of which the ovules were abortive, and Mr. Hodson informed him at the time, that no perfect seeds had been produced ; but since then we have heard from Mr. Turner, (the Gardener in that establishment), that " a few good seeds " have been produced. We shall be anxious to learn whether plants have been raised from these, and if so, what are the forms which they assume. May we not ask whether those hybrids which refuse to perfect their seeds in one climate, and under the combination of circumstances to which they are now subjected in the present state of the earth's surface, might not in another climate, and under another combination of circumstances than that at present existing, be rendered productive, and thus be enabled to assume the character of true species. If so, fresh light may be thrown upon the remarkable fact with which geology has made us acquainted of a succession of perfectly distinct races of animals and vegetables at different epochs of the world's existence, each adapted to some peculiar condition of our planet. Such a succession of differences seems to require us to admit that there must either have been a fresh creation, or else such a marked transition between the forms of existing species and those of their offspring, that we are unable to recognise them any longer as specifically identical. These speculations are fraught with the deepest interest ; they serve to impress us with some notions of the infinite distance at which the human understanding lays behind the preceptions of the Divine wisdom, and to humble any petty conceit that we might be inclined to entertain of our own limited powers. If there is a certain difficulty, even in preparing a mere technical description of the works of creation, as they may be seen and handled by us, how much greater must be those difficulties which we have to surmount, when we seek to inquire into those laws by which the past has been altered into the present state of things ; and to trace the means by which organic beings have been framed, altered, and adapted to the several changes to which the earth has been exposed. Here we are trenching upon those paths of wisdom which possibly we shall never in this life be able to penetrate to any great extent ; and of which we must remain content to believe that " God alone understandeth the way thereof, and he knoweth the place thereof, for he looketh to the ends of the earth, and seeth under the whole heavens." Job, 28th chap. 23d verse.

NEW AND RARE PLANTS,

Recently noticed at various Nurseries and Floral Exhibitions.

(Continued from page 168.)

ECHINUM GRANDIFLORUM. A fine plant having three spikes of its fine blue and purple flowers about five feet high.

GENISTA FRAGRANS. A very pretty plant for the greenhouse, in addition to the flowers being fragrant, they are produced in vast profusion and of a lively yellow colour. The plant forms a very neat bush, and may be kept from two to six feet high as desired.

HYDRANGEAS. Mr. Mills, gardener to the Baroness Rothchild, exhibited six plants of the *Hydrangea hortensis*, with fine rose colored blossoms, each head of flowers being more than a foot in diameter, and six plants with equally large heads of flowers of a fine blue color. They had been grown to great perfection by Mr. Mills, and the contrast produced, was very striking and pretty. We hope Mr. Mills will favor us with his mode of treatment for insertion in the 'Cabinet.'

ERICAS. The best collection of eight plants of *Ericas* consisted of the following kinds. *Erica vestita alba*, *Harlinelli*, *splendens*, *aristata major*, *Ampullacea superba*, *Wilmoreana*, *Beaumontiana*, *Linnaeoides superba*.

DAVIESIA SALIGNA. A very pretty greenhouse plant, blooming profusely; the flowers are of a pretty yellow, with a small dark centre; very much like an *Eutaxia*.

CACTI.—This remarkable division of the vegetable kingdom, which like the Tropical *Orchidaceae*, has been so long neglected in this country, is now commencing to assume the rank and importance in our collections, to which the originality and singularity as well as beauty of its members, fully entitle it. A few of the *Cereus* and *Epiphyllum* tribes, which are remarkable for the brilliant flowers which they produce, have long been general favorites; but we are alluding now to Sections, *Mammillaria*, *Melocactus*, *Echinocactus*, and a large portion of the Section *Cereus*, which are distinguished rather for their peculiar shape, and the varied colour and position of the spines with which they are clothed, than for the beauty of their flowers. We recently saw a large importation of these interesting plants, which had been received at the Clapton Nursery, from one of the collectors of that establishment, stationed in South America. The collection consists chiefly, with the exception of a large quantity of *Melocactus communis*, and *pyramidalis*, of *Cereus*, among which are several which it is supposed are new to the country. We particularly noticed several plants of a strong erect *Cereus*, most densely clothed with long, compressed, and brilliantly white spines. Some of the plants were from four to five feet long, and apparently in most excellent condition. But the most interesting species in the importation appeared to be a *Cereus*, which is likely to prove a rather formidable rival to the justly admired *C. senilis*. The specimen we saw, was about ten inches long, of a clear light green, with yellow spines, and clothed from the base to the summit with a substance resembling the finest wool, and of the purest white. The contrast between the vivid green and yellow, covered as it were with a delicate net work of pure white, is remarkably pleasing. We believe this specimen to be perfectly unique. We lately saw the fine collection of Messrs. Mackie's, at the Norwich Nursery, which very far exceeds all other collections that has come under our notice, both as to the number of kinds, and in superior specimens. Persons fond of this singular tribe, would be highly delighted with a sight of the stock at Messrs. Mackie's.

REFERENCE TO PLATE.

DIPLACHIS PUNICEUS. We were so struck with this very ornamental plant, that we purchased a stock of it some time since; it has the habit of the old and generally well known *Mimulus glutinosus*. The plant is a very free grower, and blooms profusely, it has been kept in the greenhouse since its introduction, but is now found to be nearly hardy, and in the open ground during summer is highly ornamental. It deserves a place in every greenhouse, or flower-border. The plant, like *M. glutinosus*, continues to bloom from May to November.

ISOTROPSIS STRIATUS. This very pretty flowering plant we saw in the greenhouse at the London Horticultural Societies' garden; it is of prostrate habit, but is conveniently tied up, or trained, so as in each instance to be neat. The plant appears to bloom freely, the flowers are produced singly



Salweenia purpurea

Lactropis striatus

Thunbergia Hanlonii



Rosa rugosa L.

Rosa rugosa L.

on a footstalk about three inches long; if the stems were tied up erect, the flowers would be brought near together, and thus congregated would be very showy. It is a desirable plant for the greenhouse—we believe it was introduced from the Swan River, by Captain Mangles.

THUNBERGIA HAWTONIA. A fine plant of this new kind of *Thunbergia* was recently exhibited in bloom at the rooms of the London Horticultural Society by Mr. Butcher, gardener to Mrs. Lawrence, of Drayton Green. The plant is of vigorous habit, and to bloom freely. We understood it had been grown in the greenhouse, if so, its vigorous habit indicates it would flourish well in the open border, or against a trellis during the summer season. It is a very desirable plant, deserving a place in every collection.

ROSA MACULATA. We procured some roses from Messrs. Wood, & Son, of Woodlands Nursery, Maresfield, Sussex selected by them, amongst which was the kind we have figured, and which has recently bloomed. It is a very beautiful kind and deserves a place in every flower-border or rosary.

GOMPHOLOBIUM POLYMORPHUM. A greenhouse plant of considerable attractions. It is of a very neat, slender, and twining habit, rising to two or three feet high, and blooming very profusely; we saw a plant of it in fine bloom at the Floral exhibition recently held at Bromley, Kent; it was exhibited by Mr. Barnes, gardener to G. Norman, Esq., and had been neatly trained in the fan manner, so as wholly to cover the same to the height of about half a yard, and it was strikingly pretty. We saw a plant tied up erect about two feet high, its flowers thus brought in a mass together, and forming a spike of some length, produced a most beautiful effect. So much pleased were we with it, though very scarce, as to purchase a stock of it. The plant deserves a place in every greenhouse or conservatory.

THUNBERGIA AURANTIA. This very pretty kind we found in the collection of Mr. Young, of the Epsom Nursery; it has the habit of the generally admired *T. alata*, flowers equally freely, and as easily cultivated; the flowers being of a fine deep and red orange have a beautiful appearance. Grown in contrast with the other kinds, it will give an interesting effect; it deserves a place in every greenhouse and in every flower-garden during summer.

FLORICULTURAL CALENDAR FOR AUGUST.

PELARGONIUMS.—Those plants that have done blooming should now be cut down, this will induce them to push fresh shoots immediately; when the shoots have pushed two inches long, the old plants should be repotted, shaking off the old soil and replacing with new. This attention to have a supply of strong young shoots before winter, furnishes the vigorous blooming wood for the ensuing spring, and the plants are kept dwarf and bushy. When the young shoots push after being headed down, there are generally many more than necessary to be retained.

They should be thinned out when an inch long: the tops now cut off may be inserted in sandy loam, and struck if required.

GREENHOUSE.—All exotic trees and shrubs belonging to this department, that are in want of larger pots, or refreshment of new soil, should (if not performed last month) immediately be done. This is the proper time to propagate Aloes, Sedums, and all others of a succulent nature, by means of suckers or bottom offsets; when detached from the parent, they should be potted singly into small pots, using light dry compost, watering sparingly till they have taken root. In the first, or second week at farthest, inoculation may be performed on any kinds of the *Citrus* genus.

DAHLIAS.—Thin out the branches of those kinds which are introduced for shows, and if it is desired to increase the stock of any new one, cuttings may be selected which will readily strike and form good sized pot-roots: water

should be given copiously every evening, during dry weather; a strata of manure should be laid for three feet around the stem of each plant, which will greatly assist in promoting a vigorous growth, and in the production of fine blooms during the ensuing month.

Earwigs and other insects begin now to infest the plants, and especial care should be taken to destroy them as much as possible before the plants get into bloom, which may be done by placing an inverted small garden pot, in which is placed a little moss; upon each stake, to which the earwigs will resort, and may be taken every morning.

AURICULAS.—Seedlings raised during spring should now be transplanted into pots for blooming.

CARNATIONS.—The blooms are now beginning to fade, and the operation of laying should be performed without delay: in doing this, take your seat astride a common form, get the pot before you, and steady the layers with your left hand, resting the back of your right hand upon the edge of the pot and holding the knife upwards between your two fore fingers and thumb, then with a steady hand and correct eye, cut upwards quite through the middle of the second or third joint from the top; the cut may be extended a full quarter of an inch beyond the joints; if the joints are wide apart always take the second; remove the leaves that ensheath the joints, and shorten the nib just below them; be careful not to break off the layers in pegging them down, and cover the joints three quarters of an inch deep; remove them into the shade, water them with a fine rosed pot, and repeat it afterwards as often as necessary.

RANUNCULUSES—roots should now be taken up and gradually and well dried in an airy room.

ROSES.—Budding should be finished as soon as possible.

CAMELLIAS—any kinds required to bloom early, should now be removed into the greenhouse.

Mignonette to bloom during winter, should now be sown in pots.

FLOWER GARDEN.—Due care must be taken respecting watering any kinds of annual, biennial, or perennial plants that may be in pots. Propagate by means of slips, and parting the roots of any double-flowered and other desirable fibrous-rooted perennial plants done flowering. Likewise increase by offsets the different kinds of Saxifrage. Auriculas should be cleared of all dead leaves, and shifted into fresh pots; prick out of the seed bed, where it was omitted last month, Seedling Auriculas and Polyanthus, in a shady situation: seeds may also be sown of both kinds in boxes or pans. Carnations may still be layered, also Sweet-williams if desired, the earlier in the month the better. Those which are layered four or five weeks ago, will now be sufficiently rooted to be taken away, or planted in beds or pots. Also plant out pink pipings, which were put out in June. Sow seeds of all kinds of bulbous rooted plants in pans or boxes, such as Spring Cyclamen, Anemonies, Ranunculuses, &c., &c. Those kinds of bulbs wanted to increase should be taken up if the leaves be decayed, and the offsets taken off. Crocus's, Narcissus's, Crown Imperial, and Lillies should only be taken up every other year. In dry weather gather those flower seeds that are ripe of any desired kinds. Plant out such kinds of autumn flowering bulbs as yet remain unplanted. Heartsease towards the end of the month, should be propagated by slips, put into a shady border, and kept quite moist till they have taken root; these will form fine strong plants for blooming the spring following. Chrysanthemums should not have their shoots stopped to make them branch, and keep them bushy, later than the middle of this month, as, if done later, the lateral produce would be weak and the blossoms small.

Where the plant has numerous shoots, they should be thinned out to a few to have the plants large and showy.

THE FLORICULTURAL CABINET,

SEPTEMBER 1st, 1839.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

OBSERVATIONS UPON THE VEGETATION OF FUNGI.

BY F. B. S. E.

IN consequence of the communication of Cryptos in a late No., I have been induced to prepare the present paper, from the desire that the doctrine so pernicious in its tendency as the one advocated in it, should not go forth among your readers, without such proof of its fallacy, and meet refutation of the inference drawn from him by the adduced fact as should remove the impression in favour of the theory therein raised. I would observe, however, that I entirely acquit Cryptos of any error other than that of having deduced a wrong inference from an isolated fact; at the same time I would ask him to consider with what jealousy the phenomena of any fact appearing to countenance such a doctrine should be examined before we allow ourselves to be convinced that our inference is true, not only as it relates to the philosophical question of *fact* is the subject of equivocal generation of importance, but also as its assertion involves the Atheistical doctrine of Materialism in its consequences; for in admitting it we must take up one or two positions, either we must consider that the work of creation is yet incomplete, and that each individual plant (we are more immediately concerned about the Fungi, I shall therefore avoid all reference to Zoology, though the same arguments hold,) is the effect of a special act of His hand, or that each is, as the supporters of the theory define it, a mere fortuitous development of vegetable matter. Few will

maintain the former position, unsupported as it is by evidence, and unwarranted by Scripture, and it will not be worth while to take further notice of it. The *à priori* argument made out against the latter is such as no evidence can surmount, for the alternative is infidelity.

Many of the German theorists comprehend all plants, Phanerogamous as well as Cryptogamous, as being the offspring of equivocal generation, but as no one among us is very likely to take up this ground, I may be allowed to assume the contrary, as respects the Phanogamæ as matter of fact. This being admitted, gives us the argument of analogy in favour of Fungi being propagated always by their sporules. Of those who apply the theory alone to the Cryptogamæ, the following are the principal arguments against the analogy, or in other words, against the vegetability of Fungi.

1. They grow with a degree of rapidity unknown in other plants, acquiring the volume of many inches in the space of a night.

2. They are frequently *meteoric*, i. e., spring up after storms, or only in particular states of the atmosphere.

3. It is possible to obtain particular species with certainty by an ascertained mixture of organic and inorganic matter in certain states of the atmosphere, as in the process adopted by gardeners for obtaining the *Agaricus campestris*, a process so certain that no other kind of *Agaricus* is ever produced in mushroom-beds.

4. "Fungi are produced constantly upon the same kind of matter and upon nothing else, as the species that are parasitic on leaves, cheese, &c." (*Lind. Nat. Syst.*)

5. They often occur in places impenetrable to the atmosphere, as in the case instanced by Cryptos.

The first of these arguments will be at once allowed to be of little weight, depending as it does upon a comparative character; for if Fungi be excluded from the vegetable kingdom because they grow faster than gourds; on the same principle the latter ought also to be excluded, as growing faster than many other plants.

The 2nd, 3rd, and 4th, are immediately connected with one-another, and a single answer will comprehend all.

Nature acts according to certain fixed laws; according to these laws a certain effect will always result from the coincidence of certain conditions, these conditions not coinciding, that effect will

not take place. Thus, for example, the germinations of seeds will not commence until the concurrence of such quantities of water, oxygen, and heat as are necessary to fulfil the conditions requisite to their growth, but immediately the conditions are fulfilled germination takes place, as a matter of necessity. The seed has no option whether or not it will grow, but grow it must when the conditions are satisfied; similarly with the sporules of Fungi, until the requisite conditions are fulfilled they do not grow, but immediately on their fulfilment, they must grow, and do grow. This then will explain why certain Fungi are *meteoric*; at a particular state of the atmosphere only are the requisite conditions to the growth of their sporules fulfilled, till then they lie dormant.

The 3rd objection merely shews that the conditions of growth of the sporules of *Agaricus campestris* are ascertained to be fulfilled when a certain mixture of organic and inorganic matter is exposed to certain states of the atmosphere, and that other Fungi do not grow too, simply proves that their growth depends upon different conditions from those on which the growth of *Agaricus campestris* does. That certain Fungi are produced but upon one kind of matter proves that there are, and there only are the conditions of growth of those Fungi satisfied; and that they are produced constantly shews the infinite number of sporules there must be distributed over the face of the earth. Fries has counted in a single individual of one small Fungus above 10,000,000 sporules! In some general observations on their number, he says, "the sporules are so infinite, so subtle (they are scarcely visible to the naked eye, and often resemble thin smoke,) so light, (raised perhaps by evaporation into the atmosphere,) and are dispersed in so many ways by the attraction of the sun, by insects, wind, elasticity, adhesion, &c., that it is difficult to conceive a place from which they can be excluded." (*Fries, Eleveh.*, 158.)

The sporules of an hundred different sorts of Fungi may be mixed in the matter of which the mushroom bed is made, or on the leaves, or in the cheese, but those only will vegetate whose conditions of growth are satisfied, which are different in each case. We have exactly parallel instances in Phœnogamous plants, where certain plants will grow only on certain soils, as on chalk, or in water, we have no difficulty in believing this, because we can put it to the test of experiment. We see certain Fungi confined to certain substances, and yet we refuse to admit the

analogy, merely because we are not able to prove the fact in the same way. This is surely most unphilosophical, not to say false reasoning.

I have now to notice the last argument which is more immediately of interest, as involving the objection and fact mentioned by Cryptos. The general argument is no argument at all, for first it presupposes a fact, which the investigations of the most accurate observers go to disprove, namely, that the sporules can reach no place impervious to the atmosphere; and secondly, it implies that because we do not know how the sporules get to any such place, they are therefore not there; hence the inference drawn from the particular fact is not *a priori*, necessarily a true one; and to show that it is probably a false one, merely requires that a reasonable explanation warranted by the observations of botanists should be given of it, such an explanation Cryptos himself supplies. The Fungus was found in the core of the apple, with which there was, in the earlier state of the fruit, a direct communication from the exterior; and not only a passage, but there were pollen tubes passing through it to the centre of the germen, which we have no reason for supposing could not have been accompanied by the sporules of the Fungus. If the pollen tubes were provided with a contrivance for finding their way inwards, why should not the sporules of the Fungus be provided with a similar one? Or do we know that the sporules might not have attached themselves to the substance of the pollen grains? We might as well assert the impossibility of travelling from York to London, although there is a direct road, not to mention the vehicles continually traversing it! That the explanation does not appear plausible is no proof of its being erroneous. It is conformable with other observed facts, and therefore not to be at once rejected merely for lack of plausibility; the degree of plausibility being a matter of opinion, and dependant much on the knowledge of the subject possessed by the observer. Who would suppose that the earth moves round the sun? surely that fact has little enough plausibility on the face of it! But even should this explanation be rejected, there is yet another which will sufficiently account for the fact, from the recent observations of Bauer, in Germany, and of Messrs. Queckett and Smith among us, it appears more than probable that Fungi are propagated on other plants by their sporules being imbibed along with water by the spongioles of the root, which on further developement of the

plant are carried up by the ascending sap into the leaves and flowers, where they expand into perfect Fungi.

To enter upon the argument against the theory is not my intention at present, as it would occupy more room than you, or time than I have to spare: but it seems to me an almost conclusive *primâ facie* objection to it, that it is so directly opposed to the general scheme and simplicity of nature. We know also that Fungi are to be propagated by their sporules, for we can raise them from them, and to suppose that they can be formed fortuitously with a prospective contrivance for their future propagation in themselves, is, either to deny that contrivance proves design, and the existence of design that of a designer, or to throw us back upon the former alternative of equivocal generation, as given in the beginning of the article.

I have, though shortly, I hope satisfactorily shown how little the above theory has to support it. I shall not trespass further on your space than to copy a paragraph from the opinion of one of the first mycologists of the age, of one equally excellent as a man, and as a botanist, the Rev. M. J. Berkeley.

“It is not to be denied that difficulties about the appearance of Fungi, as of various other plants and animals, are often great; but it seems to me rash and precipitate in the extreme, because of a few points which at present baffle our powers of investigation, to have recourse to a principle which its supporters, at least as many as are of an humble and submissive frame of mind, dare not follow out into all its consequences. For my own part I can affirm, without hesitation, that I have never read a single essay of these writers without being struck with the utter inconclusiveness of their reasonings, and with their strange oversight of points, which make against them so plainly and palpably that the most ordinary and unprejudiced reader could not fail to seize them.” (*Berkeley in Hook. Br. II. II. 2. 7.**)

I cannot refrain from another admirable quotation from an equally distinguished botanist—

“Let us not be led astray by specious theories and imaginary facts concerning bodies so far beyond the cognizance of our senses; but in the absence of demonstrative evidence to the contrary, let us believe the great Author of Nature to be consistent with himself in all his works, and to have taken care to enable the most humble seaweed to be multiplied by some means as certain and unchangeable as is provided for the most stately lord

of the forest. We may rest assured, for all philosophy, and all observation, and all reason prove it, that there is no such thing in nature as blind chance; but that all things have been carefully and wisely designed with reference to the particular circumstances under which they exist." (*Lindley in U. K. Society's Botany*, p. 119.)

In addition to the above works, I would refer *Cryptos* to the latter author's, *Nat. Syst.* p. 420, in which, as well as in the above quoted works, he will, I think, find sufficient information to convince any reasonable man.

July 10th, 1839.

F. B. S. E.

ARTICLE II.

ON TRAINING ROSES, AND OTHER CLIMBING PLANTS, IN THE FLOWER GARDEN.

BY A NOBLEMAN'S FLOWER GARDENER.

OF the numerous forms and modes of growth which plants exhibit, the climbing or twining habit would seem to be the most graceful and interesting. As man is accustomed to regard more tenderly and fervently such objects as depend upon, or, as it were, cling to him for protection and support; so, in the vegetable world, those plants appear to excite the greatest interest which require the assistance of their more robust neighbours to maintain them in their needful position, and uphold them from grovelling prostration. There is however a general gracefulness and beauty in the plants of this class and I have always observed that climbing plants are acknowledged favourites with persons of refined taste and sensitive minds.

Their sprightly and elegant disposition, the enchanting irregularity and negligence with which their branches are arranged and entangled, and the beautiful manner in which the extremities of these protrude so as best to exhibit their varied blossoms, each contribute to heighten their attractions. I now allude chiefly to their appearance in a natural state, for when subjected to the operations of training and pruning, it deprives them of much of that pleasing simplicity which otherwise characterizes them.

It is to be regretted that many kinds of vigorous growing plants are trained to walls and trellises which ought not to be substituted for that which nature teaches us is the most graceful and ornament-

al with them, and by far the best adapted to the purpose of displaying their peculiar habits and beauties by supporting them by poles. There are others of a more delicate habit which look more ornamental, and exhibit their blossoms more to view, such as the delicate *Tropæolums*, &c. The natural habit of every plant ought to be allowed if to have it in perfection, only to accommodate it so as to be kept in those bounds which other circumstances point out necessary.

The natural habitats of all our climbing plants I cannot describe, but most of the readers of the Cabinet have witnessed the common honeysuckle twining closely around the stems of trees and often interweaving its slender branches with those of the tree to which it clings for support. Those plants which have not the advantage of trees will attach themselves to the nearest shrub, and there exhibit their beautiful flowers among the branches, or if not thus privileged will trail along the ground. So far as their general mode of growth is concerned, this may be considered a fair type of most climbing plants; all are incapable of supporting themselves in an erect position, and consequently, are not frequently met with, except where trees or shrubs exist or abound.

These circumstances very naturally suggest the idea of encouraging them to ascend poles when in a state of cultivation. And though it might be supposed that similar plants require a shaded situation: this is not always the case, at least with those from temperate climates. For although found growing naturally beneath the shade of trees and shrubs, they are always seen struggling to obtain an exposure, and either protrude their shoots through the opening branches or rise above the summits of their supporters.

Climbing plants of the honeysuckle tribe are best adapted for planting at the base of small trees in a conspicuous place in the shrubbery, and to these they may be allowed to attach themselves; or, if necessary, can be secured erect till they have embraced them sufficiently to render further attention needless. It is particularly advisable to permit them to commence twining themselves; as many of them grow in a peculiar direction, which, if altered, would considerably retard their progress and detract from their beauty. No just conception can be formed of the great additional charms they would impart to the shrubbery; for when they had become firmly established, and had grown to their natural size, the trees or shrubs would be seen covered with an extensive

variety of showy flowers, and present an appearance at once beautiful and interesting. The usual sheltered situation of shrubberies or the protection which the shrubs themselves would afford, render it probable that many half-hardy climbers too might be grown within their boundary, provided the mode of growth were congenial to their habits; and even with no other variety than the hardy species of *Clematis* &c. presents, these departments might be converted into decided and lasting attractions.

There is another description of climbing plants, however, which from their natural disposition to branch, or in which such a tendency may be readily induced by pruning, possess peculiar adaptations for training to detached poles; and it is to these species, and the mode of supporting them, that I am desirous more especially to call attention. No person, but who has seen this system successfully practised, can possibly have any idea of the effect which a pillar of roses, or similar plants produces, when all their branches are bending to the earth, as it were, beneath the weight of the multitudes of flowers with which they are laden. And when poles are placed at a convenient distance apart so as to have festooned cords to which the shoots are trained, the pendant shoots in profuse bloom, give to the uprights an additional interest.

Their appearance, whether in the flower bed, around a flower garden, in the lawn, or whether arranged opposite each other on either side of a portico, an entrance, or a walk, or disposed solitarily and irregularly over any part of the pleasure-ground, is most interesting. Roses thus treated have all the concentrated beauty of the head of a standard elongated into a pillar, without any of the formality of its summit, or the bareness of its stem. When growing climbing roses to poles &c, it is necessary that a situation be chosen for planting them where they will be slightly sheltered from winds; but at the same time not to screen them from the full influences of the sun, otherwise their shoots will be very liable to suffer from cold during the winter, on account of not being thoroughly matured. A strong loamy soil is the best for growing them in, so as to flourish luxuriantly.

Poles of the requisite size and strength may be easily procured from the thinnings of larch plantations, and they will stand for many years without renewal. It is best to leave some of the branches about six inches long, as they will prevent the wind twisting the shoots around the pole so as to damage them. The bark should not be removed, both for durability and appearance,

it is far preferable to allow it to remain. Care should be taken to apportion the length and strength of the poles to the estimated height of the plant, for they will look exceedingly clumsy and unsightly if too large or too long, and the habit of the plant should be known. Pruning, when necessary, must be performed with judgment. Many kinds of climbing roses will not bear much pruning, while others may be subjected to it to a considerable extent. Those kinds with weak and flexible shoots, may be left to hang down naturally after they have attained the desired height, thinning them only when they are too numerous; but such as are stronger and more luxuriant occasionally need shortening, to prevent them from growing too spreading. Some of the hardy Passion Flowers, *Glycine sinensis*, *Bignonias*, &c. are most interesting when trained as above and make a splendid display when attached to a pole, they require to be freely pruned, as it is by close pruning that they can be induced to flower freely.

In villa gardens, and those attached to the numerous suburban residences of gentlemen, in the humble plot of the cottager, or the extensive demesne of the nobleman, climbing roses might be introduced with great advantage and I hope this commendable and interesting practice will soon be extensively adopted. I shall forward for September Cabinet a list of the best kinds of climbers in cultivation.

Middlesex, July 3rd, 1839.

ARTICLE III.

ON THE INTEREST AND PLEASURE OF CULTIVATING FLOWERS.

BY FLORA.

Floriculture, or the cultivation of flowers, is far the most delightful branch of gardening. It is true that flowers are not essentially requisite for man's existence; but still they were evidently given to us by the Giver of all good for some peculiar purpose, which purpose is very clear to any unprejudiced mind that will give the subject a few moment's consideration.

They were given, if not to minister to man's actual wants, to minister to his delight, which they do in a very great degree by beautifying the earth.

When I state that the cultivation of flowers is productive of interest and amusement, I must observe that there are several

kinds of amusement. Some are irreligious, or, at best, immoral, and many are debasing ; but that which is derived from floriculture and botany (which is so nearly allied to floriculture that I must be pardoned for joining them together), is not only a rational amusement, but is replete with instruction. To the reflective mind, the curious structure, the habits, the modes of culture, and the distribution of flowers over the surface of the whole earth ; their spontaneous growth on the tops of mountains, in the vallies, in the sandy and sun-scorched desert, and on the rugged rock, must be full of interest. I would ask, is it not pleasing to watch the growth of some handsome plant, from the time it just peeps above the soil, till it arrives at full maturity ; and would not its beautifully colored and elegantly formed flowers amply repay you for all your trouble ? Again, what can afford a more interesting recreation to the person engaged in mercantile pursuits, and shut up in a counting house or manufactory the greater part of the day, than an half hour spent in a pleasant flower garden ? and to those who have not a garden, a few plants in pots in the windows of their house are exceedingly pretty and interesting.

I think no person will deny that floriculture is a healthy pursuit. To the person in a robust state of health, who wishes to preserve it, nothing can be more subservient to his purpose than exercise in a garden ; and the invalid can certainly do nothing more likely to amend his health than take gentle exercise in a flower-garden ; such, for instance, as tying up Dahlias, Fuchsias, or Roses, watering them, &c. It may be asked, why give the preference to floriculture, when general gardening would be equally beneficial ? I would answer, because the attractions held forth by flowers are generally so much greater than any other species of plant, and of longer duration.

The study and culture of flowers is instructive. Who can look upon a flower, examine its curious construction, and notice minutely its various parts, without being filled with admiration, and being convinced that “ it is the Lord’s doing, and it is marvellous in our eyes. The study of flowers ought to impress every one with a sense of thankfulness to the Deity. We are told that “ Solomon in all his glory was not arrayed like one of these,” and yet they were not sent for man’s actual wants, but simply to render his sojourn here more delightful than it otherwise would have been.

Middlesex, 1839.

ARTICLE IV.

ON THE CULTIVATION OF ERICAS.

(Continued from page 178.)

If there be no appearance of a change, then it is necessary to apply heat to the house ; but all that is wanted in this case, is just enough to prevent the temperature from getting lower than it was when the heat was introduced. Suppose the thermometer to sink to eighteen or twenty degrees below freezing during the night ; the instrument inside should range as near as possible to what it was when the heat was applied. This however requires very particular attention. From what I know, heaths will suffer, if, after the thermometer has fallen four or five degrees below freezing inside of the house, heat be added so as to raise the temperature, and drive out the frost, during the time the thermometer is still sinking out of doors. It would be much better if the house were left without fire heat, even with the thermometer fifteen or sixteen degrees below freezing point out of doors ; such treatment is bad for all plants, but more particularly for heaths. If we were certain that the thermometer during the night would not sink more than ten or twelve degrees below freezing out of doors, no artificial heat whatever would be necessary in the heath house."

I have made this long quotation, because it is the tried practice of one of the best cultivators of the present day ; and if acted upon, will remove much of the cultivator's anxiety, so far as the true principle of applying artificial heat is concerned, and convince him how small a degree of that element is really necessary, in greenhouses of the ordinary descriptions.

During winter, water should be very sparingly applied to heaths and in times of severe frost only enough should be given to keep the plants from drooping. The case is different however, during spring and summer, when they should have it abundantly supplied once, and, in some cases, twice a day, at their roots, and two or three times during the week over their leaves and branches by using the syringe or small garden engine.

Cape heaths are very liable to be attacked by mildew, particularly in the neighbourhood of London : and some collections have been nearly destroyed from this cause. Sulphur, applied either in a dry or moist state, is the most effectual cure, and should be

applied upon the very first appearance of the disease, by dusting the plants all over with the dry flour of sulphur, or by making up a thick lather of sulphur, mixed with soap, and laid on the plants with a painter's brush. It is difficult to trace the real cause of this disease ; some attribute it to the practice of exposing them during summer to the power of the mid-day sun ; others, to the excess of water given them towards autumn ; while many think it is an atmospheric disease, and that some situations are more liable to its effects than others. It is said to be of a rare occurrence in Scotland, owing, probably, to the summers being cooler there than in England. Whatever may be the cause, the effect is in general fatal, for heaths, once attacked by the disease seldom recover.

It is said that "the best preventive is placing the plants during summer, behind a wall, hedge, or other shelter ; so that they may be shaded from the rays of the sun five or six hours in the hottest part of the day, without having recourse to awnings of any kind ; likewise, to house them early in autumn, in houses where the sashes can be drawn off in fine weather, and put on to protect them from heavy rains. For the more delicate species, generally kept in pits and frames in summer, the best preventive is to use lights glazed with green glass, keeping the lights on from nine o'clock in the morning till six o'clock in the evening, and giving plenty of air, by tilting the lights up at the back of the pits and frames, but never to use shading of any description. The lights to be drawn entirely off during the night, except in rainy weather. With this mode of treatment, slight waterings over head occasionally are beneficial."

Heaths are not very subject to the attacks of insects ; the green fly, however, sometimes assails them, but these are readily got rid of by slight fumigations of tobacco.

General Treatment Out of Doors.—A want of sufficient accommodation induces many to place a part if not all their heaths, as well as other greenhouse plants, out of doors ; and habit, we believe induces many more. The hardier and more free-growing kinds may not suffer much from this practice, but the finer and more delicate sorts evidently do. I believe the rationale of turning exotic plants into the open air, is to adopt the least of two evils ; for if they be kept under glass during the growing season, and closely crowded together, they suffer as much for want of fresh air as they would do if placed in a sheltered situation in the open

garden. It would be the most prudent method to adopt, to take out only such as are hardy and robust, leaving the more rare and tender sorts under cover ; in which they will then have plenty of room.

The season for taking heaths out of the house commences about the end of April, when some of the hardiest kinds may be set out : the next hardier section in May, and the next in June, retaining by all means the most tender of all in the house. A dry, sheltered, but not shaded situation should, if possible, be chosen for them,—dry, to protect them from a damp and impure atmosphere,—sheltered, to prevent them from being broken or upset by the wind, and shaded only to the extent necessary to secure them from the full force of the sun's rays during the heat of the day. A somewhat elevated platform, covered with coal ashes, should be formed for them, upon which they should stand, without being plunged. If the spaces between the pots were filled with sphagnum, hypnum, or other mosses, the whole might be made ornamental and extremely useful ; first, by hiding the pots, and, secondly, by preventing the heat of the sun, which is very injurious, from acting upon the roots, which are extremely fine, delicate, and always placed round the extremity of the balls, and in close contact with the pot. To avoid this, to save labour in watering, and to prevent them from being blown down, some recommend plunging them in the ground, or in the coal ash floor prepared for them ; but this latter practice is, we think, objectionable, as the roots are very liable to perish from cold and excess of humidity. Lines of cord should be stretched along the plant ground, and fastened to neat poles or stakes ; to these cords the plants should be individually fixed, to prevent their being blown down.

From the end of September till the beginning of November is the proper season for removing plants again into the house, and a somewhat similar system should be acted upon as recommended for taking them out ; only, those last taken out should be first taken into the house, and the next in rotation. During summer, water should be copiously supplied, not only at their roots, but occasionally over their leaves and branches, by using the syringe or garden engine. But this must only be understood to apply to very hot and dry weather. Heaths, and all plants grown in peat earth, should never be allowed to become very dry at the root ; for, from the nature of the soil, it is difficult to supply a sufficient degree of moisture to them after they have become very dry.

(To be continued.)

ARTICLE V.

ON CHINESE GARDENS.

(Continued from page 183.)

Both in their lakes and rivers are seen many kinds of reeds, and other aquatic plants and flowers ; serving for ornament, as well as for covert to their birds. They erect upon them mills and other hydraulic machines, wherever the situation will permit. They introduce a great many splendid vessels, built after the manner of all nations ; and keep in them all kinds of curious and beautiful water-fowl, collected from different countries.

Nor are they less various and magnificent in their bridges than in their other decorations. Some they build of wood, and compose them of rough planks, laid in a rustic manner upon large roots of trees ; some are made of many trunks of trees, thrown rudely over the stream ; and fenced with decayed branches, intertwined with the convolvulus, and climbers of different sorts ; some are composed of vast arches of carpentry, artfully and neatly framed together. They have also bridges of stone and marble, adorned with colonades, triumphal arches, towers, loggias, fishing pavilions, statues, bas-reliefs, brazen tripods, and porcelain vases. Some of them are upon a curve, or a serpentine plan : others branching out into various directions : others straight, and some at the conflux of rivers or canals, are made triangular, quadrilateral or circular, as the situation requires ; with pavilions at their angles, and basons of water in their centers, adorned with Jets d'eau, and fountains of many sorts.

Of these bridges some are entire, and executed with the utmost neatness and taste ; others seem in ruins ; others are left half finished, being surrounded with scaffolds, machines, and the whole apparatus of building.

It is natural for the reader to imagine, that all these bridges, with the pavilions, temples, palaces, and other structures, which have been occasionally described in the course of this work, and which are so abundantly scattered over the Chinese Gardens, should entirely divest them of a rural character, and give them rather the appearance of splendid cities, than scenes of cultivated vegetation. But such is the judgment with which the Chinese Artists situate their structures, that they enrich and beautify particular prospects, without any detriment to the general aspect of the whole composition, in which Nature almost always appears predominant ; for though their Gardens are full of buildings, and

Other works of art, yet are there many points from which none of them appear ; and more than two or three at a time are seldom discovered ; so artfully are they concealed in valleys, behind rocks and mountains, or amongst woods and thickets.

There are, however, for variety's sake, in most of the Chinese Gardens, particular places, consecrated to scenes of an extraneous nature ; from whence all, or the greatest part of the buildings are collected into one view, rising above each other in amphitheatrical order, spreading out to a considerable extent ; and, by their whimsical combinations, exhibiting the most magnificent confusion imaginable. Their artists knowing how powerfully contrast agitates the human mind, lose no opportunity of practising sudden transitions, or of displaying strong oppositions, as well in the nature of the objects which enter into their composition, as in their modifications. Thus they conduct you from limited prospects to extensive views : from places of horror to scenes of delight ; from lakes and rivers to woods and lawns ; and from the simplest arrangements of nature, to the most complicated productions of art. To dull and gloomy colours, they oppose such as are brilliant ; and to light, they oppose darkness : rendering, by these means, their productions not only distinct in the parts, but also uncommonly striking in their total effect.

The cascades of the Chinese, which are always introduced, where the ground admits, and where the supply of water is sufficient, are sometimes regular, like those of Marli, Fiescati and Tivoli ; but more frequently they are rude, like the falls of Trolhetta and the Nile. In one place, a whole river is precipitated from the summit of the mountain, into the valleys beneath ; where it foams and whirls amongst the rocks, till it falls down other precipices, and buries itself in the gloom of impenetrable forests ; in another place, the waters burst out with violence from many parts, spouting a great number of cascades, in different directions ; which, through various impediments, at last unite, and form one vast expanse of water. Sometimes the view of the cascade, is in a great measure intercepted by the branches which hang over it ; or its passage is obstructed by trees, and heaps of enormous stones, that seem to have been brought down by the fury of the torrent : and frequently rough wooden bridges are thrown from one rock to another, over the steepest parts of the cataract ; narrow winding paths are carried along the edges of the precipices ; and mills and huts are suspended over the waters ; the seeming dangerous situation of which, adds to the horror of the scene.

They have likewise cascades, contrived to fall from precipices, in large regular sheets, smooth as glass, and forming arches, that leave a considerable space between the rocks and the water. This is laid out in fine pebble walks, adorned with grass plots, and borders of flowers of every sort, that thrive in moist situations : and in the upright of the rocks are hollowed grottos, with many little neat recesses, placed at different heights, and communicating with each other by steps or passages cut in the solid stone, from whence the cascades, when illumined by the sun, appear like a multitude of rainbows, glittering with a thousand colours ; and the adjacent trees, buildings or other objects, seen through the brilliant medium, have a very uncommon, picturesque effect.

As the Chinese are so very fond of water, their Gardeners endeavour to obtain it by art, wherever it is denied by Nature. For this purpose, they have many ingenious inventions to collect ; and many machings, of simple construction, which raise it to almost any level : at a trifling expense. They use the same method for overflowing vallies, that is practised in Europe ; by forming heads of earth or masonry at their extremities ; where the soil is too porous to hold water, they clay the bottom, in the same manner that we do to make it tight : and in order to prevent the inconveniences arising from stagnant waters, they always contrive a considerable discharge to procure motion, even where the supply is scanty ; which is done by conveying the discharged water back, through subterraneous drains, into reservoirs ; whence it is again raised into the lake or river. They always give a considerable depth to their waters, at least five or six feet, to prevent the rising of scum, and the floating of weeds upon the surface ; and they are always provided with swans, or such other birds as feed on weeds, to keep them under.

In overflowing their grounds, and also in draining them, they take all possible care not to kill many of their old trees, either by over moistening their roots, or draining them too much ; saying, that the loss of a fine old plant is irreparable ; that it impairs the beauty of the adjacent plantations : and often likewise destroys the effect of the scenery, from many distant points of view ; and in shaping their grounds, they are, for the same reason, equally cautious with regard to the old plantations ; carefully observing never to bury the stems, nor to expose the roots of any trees which they mean to preserve.

(To be Continued.)

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

1. *LCELIA AUTUMNALIS*. Autumnal flowering *Lœlia*.

(Pax. Mag. Bot. & Bateman's Orchid. 9.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A very beautiful species introduced from Mexico in 1836; where it was found growing upon trees at a considerable elevation. The flowers are of a lovely transparent pink colour, and are produced in spikes of from one to three feet in length, according to the strength of the plant. Messrs. Lodiges, Rollinsons, and others, possess plants for sale and every cultivator of orchidaceous plants should possess it. Mr. Bateman observes "it thrives best in a moderate temperature, and requires to be high potted, as by that means, the roots are more likely to be retained in a healthy state, and are better able to withstand the extremes of heat and moisture which will sometimes occur, and which have been found excessively injurious to *Lœlias*, *Cattleyas*, and species of some allied genera. In winter they should be very sparingly watered, and kept in almost a dormant state."

2. *LILIUM THUNBERGIUM*. Mr. Thunberg's Lily.

(Bot. Reg. 38.

LILIACEÆ. HEXANDRIA MONOGYNIA.

This splendid lily was introduced along with various others from Japan, by Dr. Siebold; and is now cultivated by Messrs. Rollinsons and Youngs. The flowers are large and of a splendid orange colour. Dr. Siebold in his "Flora Japonica," observes, "that in more than twenty kinds of lilies brought by me from Japan to Europe, and deposited in the Ghent Botanic Garden, are varieties of *L. speciosum*. To the one with flowers rose-colored blotched with purple, I gave the name of *L. speciosum Kœmpferi*, because it was the indefatigable botanist Kœmpfer, who first made it known to Europeans. For the second with pure white flowers, I preserve the Japanese name *Tametomo*, which it bears in its own country, in consequence of having been first brought by that hero from the Loo choo islands, as the Japanese assert. The beauty and fragrance of the flowers of these two kinds rank them amongst the most magnificent of their genus; I should even say that *L. speciosum Kœmpferi* stood at the head of them all, if a variety of *L. longiflorum*, which I have seen in Japan with flowers often eight or ten inches long, did not dispute the palm on account of its sweetness. *L. speciosum Kœmpferi*, is cultivated all over Japan as an ornamental plant. Its true country is probably China, or rather Korii, if we may judge from its name *Korai-juri* or *Korai-lily*. It flowers in May and June; in the Botanic garden at Ghent it did not flower in 1832 (the first time in Europe) till August. Like other kinds of lily it is freely propagated by scales; it does not however bear bulbs in the axils of the leaves. It succeeds very well in a cold greenhouse, and even in the open air if protected. The variety of *L. tametomo*, although it has pleased some botanists to make a peculiar species of it, under the name of *L. eximium*, differs nevertheless, only in its flowers being quite white, and the leaves rather more distinctly stalked. According to some of the Japanese botanists it is found wild, not only in the Loo-choo islands, but also in the north of Japan; but it has, perhaps, been confounded with *L. japonicum*, which is often wild in those countries."

3. *GESNERIA STRICTA*. Upright Gesneria. (Bot. Mag. 3738.)

GESNERIACEÆ. DIDYNAMIA, ANGIOSPERMIA.

This pretty and very robust growing species was collected by Mr. Tweedie, in South Brazil, and forwarded to the Glasgow Botanic Garden, where it bloomed for the first time in July 1835. The flowers are about two inches long, of a red colour, and the habit of the plant is similar to *G. Sceptrum*, it requires to be cultivated as the other species.

4. *BURLINGTONIA MACULATA*. Spotted Burlingtonia. (Bot. Reg. 44.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

This very distinct and pretty species was obtained from Brazil, by Messrs. Loddiges, in whose extensive collection it bloomed during the spring of 1838. The flowers are yellow spotted with brown, except the inner part of the lip which is of a delicate white. It requires similar treatment to what we described last month at page 187, for *Dendrobium Jenkensonii*.

5. *CATTLEYA CITRINA*. Yellow flowered Cattleya. (Bot. Mag. 3742.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A very fine and distinct species grown in the collection at Woburn Abbey, where it was received from Mexico in 1838. The flowers are about the size of the common *Tulipa sylvestris*, which it also somewhat resembles in form and colour. The plant is of easy culture, and we have no doubt will prove a valuable acquisition.

6. *GESNERA MARCHII*. Mr. March's Gesnera. (Bot. Mag. 3744.)

GESNERIACEÆ. DIDYNAMIA. GYMNOSPERMIA.

A beautiful and distinct variety introduced from the Organ Mountains of Brazil, by Mr. Wailen, of Newcastle, in whose collection it has bloomed. The stem grows from two to three feet high, producing numerous blossoms of a fine scarlet colour.

7. *HETEROTROPA ASAROIDES*. Asarabacca like Heterotropa. (Bot. Mag. 3746.)

ARISTOLOCHIACEÆ. DODECANDRIA MONOGYNIA.

A very singular and rare plant introduced from Japan, by M. Von Siebold, and is cultivated at the Epsom Nursery, where it blossomed towards the end of February. It bears great affinity with the genus *Asarum*, but from which it has been separated on account of the arrangement of its stamens, and structure of the anthers, and also because of the nearly superior position of the ovary. The flower bears a perfume similar to a ripe apple, and is of a dull purple colour, blotched or waved with grey towards the throat.

8. *INGA HARRISII*. (Bot. Reg. 41.)

MIMOSÆ. POLYGAMIA POLYANDRIA.

A native of Mexico, from whence it has been imported by Thomas Harris, Esq., of Kingsbury, in whose fine collection it has recently bloomed; many of the Mexican plants require a temperature some little higher than a common greenhouse, so the present plant appears to require. It is a pretty climbing shrub, flowering freely; the corolla is rose coloured, beyond which the stamens protrude more than half an inch, and appear like numerous crimson silken tassels. It is easy of culture, and readily propagates by cuttings of the young shoots. It delights in a fresh and rich soil.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

LISIANTHUS RUSSELLIANUS.—I have purchased on several occasions plants of *Lisianthus Russellianus*, but after trying my utmost to get a plant to bloom, I have failed hitherto. I have tried to grow it in a cool frame, greenhouse, and hothouse, and with peat soil, peat and loam, and rich loam, but in every case unsuccessful. I shall feel much obliged to some reader of the Cabinet, who have succeeded to bloom the plant, (for I see by accounts of Floral Exhibitions, several large plants in bloom have been shown;) would furnish me with the particulars of the mode of treatment through the medium of the Cabinet.

Aug. 3rd, 1839.

CLERICUS.

ANSWERS.

— **ON MICHAELMAS ASTERS.**—A list is requested by a Correspondent in a late Number of the Floricultural Cabinet, if the Conductor wishes for such a list, he need only apply to Mr. Rivère, for in a small work called the *Vintor*, (of last month) is to be found the following remarks upon that flower, "attention has lately been paid to the increase of the Michaelmas Aster, and already we have for this month alone about a dozen of various heights, from two feet high (*Aster Amellus*) to seven feet high (*Aster Roseus*) and from fine white (*Aster Elegans*) to bright pink, pale blue and purple (*Aster Novæ Angliæ*.) Mr. Rivère has been successful in cross breeding those flowers, so cheerful at the commencing of our gloomy season, by tying together the flowers of the different sorts he is desirous of crossing; such as the rose-coloured and the white, the rose and the blue, and he describes his seedlings for one season, one thousand in number, as having all degrees of colours, from dark blue to the most beautiful azure, from light rose colour to the most delicate blush, and from pure white to the French, or greyish white, in countless varieties of shades, and of all sizes, some being the size of a sixpence, some an inch, or inch and a half in diameter, and some semi-double."

Such is the report made of the Michaelmas Aster in the above mentioned work, and if it should be of use to Mr. Harrison, and procure a list with such prices affixed as will come within the scope of a **SLENDER PURSE**, it will greatly contribute to the pleasure of H. M. E., and the beauty of her little garden.

(We shall be obliged if our correspondent would send us the number of the Publication to our Publishers, or inform us where to purchase it, as we cannot obtain it after several applications.—CONDUCTOR.)

REMARKS.

ON HYBRIDISING.—It remaineth to be ascertained whether there did exist a real natural, and indefeasible difference between plants which could produce a fertile, and those which could produce a sterile offspring, by blending their races. It was my opinion, that fertility depended much upon circum-

stances, of climate, soil, and situation, and that there did not exist any decided line of absolute sterility in hybrid vegetables; though from reasons which I did not pretend to be able to develop, but undoubtedly depending upon certain affinities either of structure or constitution, there was a greater disposition to fertility in some than in others. Subsequent experiments have confirmed this view to such a degree, as to make it almost certain that the fertility of the hybrid or mixed offspring depends more upon the constitution than the closer botanical affinities of the parents. The most striking and unanswerable proof of this fact was offered by the genus *Crinum*, which is spread round the whole belt of the globe, within the tropics, and within a certain distance from them, under a greater variety of circumstances affecting the constitution of individuals, which, nevertheless readily intermix when brought together by human agency. The plant called *Crinum capense*, (formerly *Amaryllis longifolia*), impregnated by either *Crinum zeylanicum*, or *scabrum*, both at that time also called *Amaryllis*, produced offspring, which during sixteen years proved sterile, probably because notwithstanding their botanical affinity, the first is an extra tropical aquatic plant, and the two latter tropical plants which affect drier habitations, and readily rot, at least in this climate, in a wet situation. The same *C. Capense*, impregnated by *Crinum pedunculatum*, *canaliculatum*, or *defixum*, produces a fertile cross, though they are so dissimilar as to have been placed in different genera; and the author was formerly reproved by botanists, as having committed an absurdity, when he insisted upon uniting them. The reason of the fertility of their joint produce, seems to be that they are all aquatic or swamp plants; and it may be further observed, that the crosses with the two former, the plants being all extra-tropical, are much more fertile than that between *C. Capense* and *defixum*, because the latter is a tropical plant. The mules *Scabrum* and *Capense* having continued so many years with every appearance of absolute sterility, without any change of situation or treatment, at last produced one good seed in 1834, and another in 1835. These facts were of such an overbearing nature, that it became impossible for those who had charged the author with absurdity for uniting the parents under the genus *Crinum*, to which even certain other plants were then asserted to be more nearly allied, than the species at that time called *Amaryllis*, to contend any longer that they producing a fertile offspring were of different genera, and they will probably be never again disunited in any botanical work; but the facts furnish much ground for the serious consideration of men of science. It happens as if expressly designed to overthrow the theory, that the identity of species is proved by fertility or sterility in the mixed issue; that while *C. Capense zeylanicum* and *Scabrum* are very similar in their general appearance, and yield an offspring which has been found quite sterile, except in the case of the two seeds above mentioned, *C. Capense* and *Pedunculatum*, are as unlike, as perhaps any two species of any known genus; and if it were asserted that *C. Capense* and *Pedunculatum* are one species; and *C. Capense* and *Scabrum* two species, the assertion would appear to any person looking at the plants, too preposterous to require a serious answer.

ON MODELS FOR FLOWER GARDENS.—At some of the Floral Exhibitions recently held in, and about London, we saw several models of flower gardens formed with considerable skill, so as not only to be highly interesting objects, but very instructive. Green moss was placed so as to represent turf, sand for gravel, and flowers of a kind in masses to represent flower beds filled with flowers. Persons desirous of seeing something of the effect of a certain plan, would be able by such a prepared model to form an idea of its effect, if so constructed as a garden; or to see the contrast of arranging the colours even in a garden already formed. We think it would be useful to encourage the production of models of flower gardens, lawns with beds, and even kitchen gardens, plantations, and parks, by showing the grouping of various kinds of trees, &c. If Floral Societies would offer prizes for the construction of models formed after this manner, we feel confident it would meet with

the approval of visitors, and be found beneficial. Where Dahlias, China-Asters, and similar flowers are grown in quantities they afford a profusion of materials to appropriate for such purposes.—(CONDUCTOR.)

NEW AND RARE PLANTS,

Recently noticed at various Nurseries and Floral Exhibitions.

(Continued from page 191.)

Podolobium storophyllum.—A pretty flowering greenhouse plant, with yellow flowers having a reddish keel, blooming very freely.

Tabernaemontania coronaria.—The flowers are white and interesting.

Dillwynia glycinifolia.—Mr. Butcher, gardener to Mrs. Lawrence, exhibited a fine specimen of this pretty flowering plant. Its very numerous yellow and red flowers giving it a showy and interesting appearance.

Chorozema elegans.—This new and beautiful species has recently bloomed in the greenhouse in the London Horticultural Society's Garden. The flowers are of a brilliant yellow and crimson, produced in large spikes. It is a very desirable plant for the greenhouse.

Verbena Fergusonii.—This is similar to *V. Neilli* in habit, and the flowers of a lighter colour than *V. arranana*.

Stachys Coccinea.—This plant is a native of Mexico, and bloomed at the Clapton nursery with the *Salvia patens*, &c. The plant grows to about half a yard high, having numerous branches flowering freely. The flowers are of a dull red, but though not brilliant when grown in masses, produce a pretty effect. It blooms in the open border from June to October.

Echium giganteum.—A fine plant of it was exhibited by Mr. Fielden, gardener to J. Linwood, Esq.; it had fine spikes of blue flowers, very showy. Both the kinds here exhibited deserve a place in every collection of greenhouse plants.

Anthocercis littorea.—A greenhouse plant, flowers yellow, with dark streaks in the inside.

Pimelea hypericifolia; flowers white, having bright yellow anthers, interesting.

Mahernia pimata.—A pretty flowering greenhouse plant, profusely in bloom, flowers bright scarlet outside, and bluish inside.

Hemerocallis rutilans.—The flower-stems rise about a foot high, having flowers of a golden yellow.

Lilium longiflorum.—A very fine specimen having fourteen large flowers, of a most pure white, and fragrant. The plant had four stems rising about four feet high; it deserves a place in every greenhouse.

PELARGONIUMS EXHIBITED BY MR. CATLEUGH.

Victory, lower petals nearly white, upper petals with a large dark spot, slightly streaked.

Florence, lower petals pale rose, upper petals having a large dark spot, slightly streaked. The flower is nearly white at the centre.

Sylph, lower petals pale rose, upper petals with a large dark spot, the flower becoming whiter at the centre. The flower is very large.

Stella, lower petals bright pink, upper petals rosy crimson, with a moderate sized dark spot.

Splendidum, upper petals of a bright rosy crimson, having a largish dark spot, lower petals rosy crimson. The flower is lighter towards the centre, and of a very superior form.

Rienzii, the flower is of a beautiful pale pink, with a large dark spot on each of the upper petals, streaked with a darker colour, and having a centre nearly white. It is of a very superior form.

Una, white slightly tinged with bluish, a moderate sized crimson spot on upper petals. The flower is of a fine form.

Magna Charta, white tinged with blush, the upper petals having a large dark spot, and streaked with dark. Flowers of a fine form.

Orange Boven, lower petals of a beautiful rosy pink, upper petals rosy crimson, having a moderate sized dark spot.

Fanny Garth, lower petals of a pretty light pink, upper petals pink having a large dark crimson, spot which is streaked and veined with darker; a very fine flower.

Mary of Burgundy, flower of a fine rose colour, having a large dark spot on the upper petals; fine form.

Discount, lower petals pink, upper petals of a rosy crimson having a dark eye. A very profuse bloomer.

Floribunda, whitish blush, upper petals having a large dark spot. The flower is of a superior size.

Dowager Queen, lower petals of a pale blush, upper petals having a large dark spot shading off to a fine crimson towards the edge of the petals.

Rebecca, lower petals pink, upper petals crimson, having a large dark spot. Flower middle sized.

Polygonum amplexicaule.—A hardy perennial plant, whose flower stems rise to the height of three or four feet, blooming from July to September, producing numerous spikes of crimson flowers. It requires, like most of the family, to be grown near water, so that its roots may reach it. (Bot. Reg.)

Medicago clypeata.—Sent from the north of India, the flowers are uninteresting, but the seeds are curious, resembling those seen in seed shops called snails. (Bot. Reg.)

Phaius bicolor.—Ochidaceæ.—Sent from Ceylon to Messrs. Loddiges; flowers of a very bright deep red, with a yellow lip. (Bot. Beg.)

Goodyera rubicunda, Synonym. *Neottia rubicunda*.—It has the habit of *G. procera*, but rather a less plant. The flower spikes rise about a foot high; the flowers are of a cinnamon brown colour, with a white lip. (Bot. Reg.)

Maxillaria lentiginosa.—The flowers are very like those of *M. stapeliodes*, only the spots are redder. It is a native of Brazil. (Bot. Reg.)

Vanda congesta.—Somewhat resembles *V. multiflora* in its flowers, being of a yellow and brown colour.

Mr. Hartweg collected in the mountainous districts of northern Mexico seeds of many species of *Pinus*'s, and Dr. Lindley states in his truly meritorious work, the Botanical Register, that six of them are quite new to this country, lengthened descriptions of each are given.

Pinus Hartwegii.—Found to be a tree rising sixty feet high, the branches are very stout, like *P. palustris*; the leaves are upwards of six inches long, produced in fours. The cones of seed are four inches long and about two in diameter.

Gompholobium versicolor.—A greenhouse climber, the flowers are of a reddish yellow colour, introduced by Captain Mangles.

Acacia cynophylla.—Introduced too, we believe, by Captain Mangles.

Grevillia thelamanniana.—A native of New Holland, which produces racemes of fine scarlet flowers, well meriting a place in every conservatory and greenhouse.

Canostylis juncea.—A stiff growing herbaceous greenhouse plant, producing numerous flowers, well shaped, yellow.

Thysanotus isanthera.—It is an herbaceous greenhouse plant, flowering freely; the flowers are of a fine purple, much fringed.

Glaucium rabrum.—Like the horned poppy, but of a deep red colour.

Centaurea pulchra.—An annual of considerable beauty; the flowers are of a fine deep blue, with a purple centre; it has flowered in the garden of the Hot. Society.

Gloxinia grandiflora.—Introduced from America; the flowers are like to *G. caulescens* in form and size, but of a lilac colour.

Thysanotus proliferus.—A native of the Swan River, and flowers for several successive months in the greenhouse. We believe it was introduced by



Ipomoea pes-caprae



Conium maculatum



Sanicula oleracea



Captain Mangles; we saw it in bloom at the Clapton Nursery. The flowers are of a deep rich blush chocolate colour, having the petals beautifully fringed. It is a very neat and interesting plant, well deserving a place in the greenhouse.

Chorizema ovata.—A fine specimen three feet high with numerous branches, in profuse bloom, was exhibited by Mr. Butcher, gardener to Mrs. Lawrence. It was a most beautiful object.

REFERENCE TO PLATE.

EPACRIS COCCINEUS. We have remarked in a former Number of the Cabinet on this very beautiful flowering plant, where we stated it had been raised by Mr. Kynoch, gardenerto A. Copeland, Esq., Leyton, Essex, where it had bloomed; we have since that time seen it in as profuse bloom at Mr. Lowe's, as the well known *E. impressa*. The present plant is of more robust habit than *E. impressa*, the foliage more dense, and of larger size. The flowers are larger, and more campanulate: plants are not yet to be procured, but when to be obtained, it deserves a place in every collection of greenhouse plants.

GOMPHOLOBIUM VERSICOLOR. This very pretty flowering greenhouse plant we recently saw in bloom. It was introduced from the Swan River Colony by Captain Mangles, R. N., and has flowered in the fine collection of R. Mangles, Esq., Sunning Hill, Berks. It thrives well in a compost of sandy peat and loam, and strikes freely by cuttings. The plant has a tendency like *G. polymorphum*, to grow up with but few lateral shoots, but if the leading shoot of a plant be pinched off it causes it to push lateral shoots, which if stopped too, will induce a production of shoots so as to make it quite a bushy plant. It deserves a place in every greenhouse.

TWEEDIA CÆRULEA. We have recently seen at the London Floral Exhibitions several plants in fine bloom. It is a handsome climbing plant, and when properly grown is very handsome. In consequence of its high price, those who procured plants, and not knowing its peculiar mode of treatment, have generally kept it in the hothouse or greenhouse, both of which situations are inc congenial, and the plant becomes sickly; and in proportion to the height of the temperature the flowers become paler; when this has been the case, persons have been disappointed with it. It appears to require a greenhouse protection in winter, or a good cool frame, and to be turned out into the open border in May, trained against a good aspected wall, trellis, or some suitable support, where it is found it will bloom vigorously, and the flowers to be of a fine blue colour; it blooms from April to September. It has been supposed to be herbaceous, but plants have been kept for two years, and have now a shrubby habit. It is easily increased by cuttings; the plant deserves a place in every collection.

EPACRIS IMPRESSA var. *PARVIFLORA*.—The present kind was sent from New Holland by our much respected friend Mr. James Backhouse, to the York Nursery, under the name of *E. ruscifolia*; it is a very pretty and interesting plant, and like all the family of *Epacris* merits a place in every greenhouse; their neat and handsome flowers blooming from August to April, and thus are highly ornamental for winter, adorning the greenhouse. *Epacris*'s require to be carefully attended to, they ought not to be allowed to flag for want of water, and yet soon sustain injury by an excess; it is advisable to place the plant rather high in the centre of its pot, as should be done with heaths.

A sudden removal from extremes in temperature is also very injurious to the *Epacris*.

FLORICULTURAL CALENDAR FOR SEPTEMBER.

Annual flower seeds, as *Clarkia*, *Collinsia*, *Schizanthuses*, Ten-week Stocks, &c., now sown in pots and kept in a cool frame or greenhouse during winter, will be suitable for planting out in open borders next April. Such plants bloom early and fine, and their flowering season is generally closing when Spring sown plants are coming into bloom.

Carnation layers, if struck root, should immediately be potted off.

China Rose cuttings now strike very freely: buds may still be put in successfully.

DAHLIAS—Where the lateral shoots are numerous they should be thinned, so as to induce vigorous shoots and flowers. Seed from early blown flowers will be ready to gather by the end of the month.

Mignonette may now be sown in pots, to bloom in winter.

Pelargoniums, cuttings of, may now be put off; plants from such, will bloom in May.

Pinks, pipings of, if struck, should now be taken up and planted in the situation intended for blooming in next season.

Plants of Herbaceous *Calceolarias* should now be divided, taking off offsets and planting them in small pots.

Verbena Melindres (*chamædrifolia*) &c. Runners of these plants should now be taken off, planting them in small pots, and placing them in a shady situation. It should be attended to as early in the month as convenient.

Plants of Chinese *Chrysanthemums* should be repotted if necessary; for if done later, the blossoms will be small. Use the richest soil. Pinch off the heads of the plants having only single stems to induce lateral shoots, and obtain heads of flowers.

When *Petunias*, *Heliotropiums*, *Salvias*, *Pelargoniums*, (*Geraniums*,) &c., have been grown in open borders, and it is desirable to have bushy plants for the same purpose the next year, it is now the proper time to take off slips, and insert a number in a pot: afterwards place them in a hot-bed frame, or other situation having the command of heat. When struck root they may be placed in a greenhouse or cool frame to preserve them from frost during winter. When divided, and planted out the ensuing May in open borders of rich soil, the plants will be stocky and bloom profusely.

Lobelias, offsets of, should be potted so as to get well rooted before winter.

Tigridia, *pavonia* roots may generally be taken up about the end of the month, and a quantity of soil should be retained and be allowed to remain around it to dry, it contributes much towards preserving them through winter in a sound condition.

Greenhouse plants will generally require to be taken in by the end of the month, if allowed to remain out much longer, the foliage will often turn brown from the effects of cold air. The earlier succulents are the better.

Plants of *Pentstemons* should be divided by taking off offsets, or increased by striking slips. They should be struck in heat.

PANZIES.—The tops and slips of *Panzies* should now be cut off, and be inserted under a hand-glass, or where they can be shaded a little. They will root very freely, and be good plants for next season.

Evergreen hardy shrubs may be planted towards the end of the month, puddle and water freely till the autumn rains set in.

FLOWER GARDEN.—Towards the end of the month strong winds generally prevail, so that all plants should be securely tied up to prevent their being broken.

Seeds of many kinds of flowers will be ripe for gathering this month.

When *Lillies*, *Crown Imperials*, *Narcissuses*, &c. require dividing, take them up now, and replant them immediately.

THE FLORICULTURAL CABINET,

OCTOBER 1st, 1839.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON THE CULTIVATION OF CALCEOLARIAS.

BY MR. E. BARNET, VICTORIA LODGE, REGENT'S PARK, LONDON.

THE admiration of this lovely tribe of flowers, as far as my observation goes, has been universal, their delicacy, graceful form, elegance, variety, and richness of coloring, with duration of a blooming period of eight successive months, alike combining to give them interest.

At some of the exhibitions of flowers recently held in and around the metropolis, there have been some most striking and beautiful spotted kinds exhibited, as the Conductor of the Cabinet would see, (We did;) white, cream, yellow, orange, scarlet, crimson, lilac and pink grounded flowers, charmingly spotted with dark.

I have a considerable collection of my own, and having paid more than the usual attention given by an amateur to their cultivation, I forward some remarks on the mode of treatment I have very successfully pursued, so as to have plants in pots three feet high with a profusion of flowering branches, so as to compose a compact head of ten feet in circumference.

Propagation.—The herbaceous kinds are readily increased by division of the offsets, which will generally be found spotted. In order to have plants to bloom vigorous the following year, they should be taken off early in August, and be planted in pots four or five inches in diameter, and be placed in a cool frame, where

they may be kept till the following spring, by preserving them from frost and being over damp.

Half Shrubby and Shrubby kinds are easily increased by slips, taken off close to the stems they proceed from. Where an opportunity occurs of keeping plants to propagate from closely together, and they are placed upon a damp floor, or in a damp situation, that has the effect speedily to induce the production of small roots at the lower parts of many of the shoots, these shoots being taken off and potted in small pots in August or September, make fine plants for vigorous bloom the following year. Though slips and cuttings destitute of these infant rootlets, will strike if inserted in sandy peat and loam and placed in gentle heat in a hot bed frame, yet I find the foregoing method much more certain and much less trouble is occasioned.

During the autumn and winter I find my plants, so placed, afford me a numerous stock of rooted slips to take off, and I keep up my collection of young and handsome formed plants with little trouble, and am enabled to turn out into the open beds, not only my old plants, but any desired quantity of young ones too. During the last three years I have purchased one hundred and six of the best kinds I could meet with, and by this most easy method of propagation I have not lost one kind, but have a sufficient stock of each.

Compost.—I find equal portions of turfy sandy peat, loam, leaf mould, and well rotted hot-bed dung, well incorporated together for a few weeks before using to be the most suitable for growing the plants vigorously, I never have the compost sifted, but well chopped with the spade when going to use it for potting.

Potting.—A very free proportion of drainage is essential to their success, and I place in small pots, one inch deep of broken potsherds, and one inch of moss upon them, the largest pots I give two inches deep of each, upon this substrata the soil is placed. The Calceolaria imbibes a considerable portion of water by the roots, when it is in a healthy condition, to supply it with a fresh element of it, is therefore necessary; if there be not a free drainage to allow superabundant water to pass, the soil becomes saturated and sour, which occasions sickness, and often the death of the plant.

The time I repot my young plants, potted off in August and September, is about the middle of February; the most vigorous I plant in pots one foot in diameter and ten inches deep. Weakly

plants I put in pots half the size for a few weeks, and then repot them into the larger size, as the circumstances of growth require ; in pots of this size I bloom my stock generally, but when I see a plant in such a sized pot that would bear a larger I remove it into a size bigger.

After potting I place the plants in a greenhouse upon a moveable stage, which is fixed so that the plants may be about a yard from the glass ; (the stage is raised or lowered as desired by the turning of a wheel rack, with notch to secure at each end of the stage ;) here I keep them till they bloom, giving them a free supply of air, to prevent them growing up weakly. The surface soil in the pots is frequently stirred, so as to allow water to pass through regularly, and evaporation to rise to the plants. The Calceolaria is more susceptible of injury by watering than most plants in general cultivation, so that after all attention to draining, compost, and stirring the surface repeatedly, it is requisite to attend to a due order in giving a supply ; they should be so attended to as to keep the soil moist, not wet ; previous to the plants blooming I frequently sprinkle them overhead with water early in the morning, this keeps the foliage clean on its upper side, and the damp arising to the under side keep the plants free from the red spider, as well as promotes the rootlets before named. When the plants are in bloom I have a canvas cover over the roof of the house where the plants are. By keeping them in doors I have an opportunity of impregnating the flowers and obtaining seeds. I have a numerous progeny of seedlings now coming into bloom, many very beautiful and distinct. As soon as I gather the seed I have the plants placed out of doors where they are shaded from the sun from eleven to three o'clock, they push again here and bloom for the greenhouse in October ; if I want increase, I retain a few plants in a moist situation, as before observed.

E. BARNET.

Victoria Lodge, Regent's Park.

ARTICLE II.

REMARKS ON PROPAGATING THE HEARTSEASE.

BY PENSE.

My intention in sending the remark on propagating the Hearts-ease, is with a view to render an acceptable service to the public, for the success of a collection must depend mainly upon this process. I do not share in the fears that have been expressed, that I shall make the public so knowing, that they will not only strike their own plants, but also supply their neighbours, to the injury of the trade. It is no disadvantage to a nursery-man for a private person to amuse himself with striking a few cuttings; for though it may enable him to keep up his old sorts, he will naturally as he grows more and more fond of the fancy, purchase the new and beautiful kinds, which are annually raised from seed. Neither is there any objection to his giving away a few plants to his friends for it helps to extend the fancy, and those who began with a stock that cost them nothing, may soon become purchasers in their turn. All parties must remember, that if they wish to keep pace with the improvements that are continually going on, they must be always adding a few of the newest and best sorts to their collection; for the flower may still be said to be almost in its infancy, and what we admire one year is almost sure to be surpassed the next. I think, indeed, that novelty is a point to which the judges ought to pay more attention than they generally do at exhibitions, provided of course, that all other good qualities accompany it. And in this respect, as indeed in every other in which this flower is concerned, the amateur need not fear to compete with the nursery-man, for if his stock is smaller, his attention is probably less divided.

I have found there is an inconvenience, and, frequent disappointment, attending the habit of putting in large pieces as cuttings. I will therefore point out how I have succeeded in various ways in the use of small ones.

If they are intended to be struck under hand glasses, there should be a shady situation chosen for them. Then prepare some finely sifted mould, consisting of good loam and leaf mould, if it can be procured, to which add about one fourth-part of road sand, or river sand. Perhaps the best plan is to add the ingredients together first, and sift them afterwards, as this will mix them more

thoroughly than any other method. Then make a bed of not less than three inches deep, well pressed down with the hand or spade, and leave a margin of two inches beyond the space which the cuttings are to occupy. The earth should be watered with a fine rosed watering pot a few hours before it is planted, in order that the cuttings may be fixed more firmly in the ground. The person of course must be prepared with some number-sticks, about three inches long and not more than half an inch wide, to mark every sort as it is put in. All may begin numbering from either side, provided he always keep to the same way ; but it is usual to commence counting from the left corner of the glass, to put the stick down first, and then the cuttings in succession behind it, till the next stick marks the commencement of a fresh variety. Leave about half an inch between the rows, and an inch between the cuttings in each row. The cuttings themselves should be about two inches long, taken off just below a joint, and then should be inserted about an inch deep, taking special care not to make the hole deeper than required, or else to fill it well in afterwards, that the bottom of the cutting may come immediately in contact with the soil, instead of being suspended in the air with a hole full of stagnant water below it. Press the soil gently but firmly round the cuttings, and sprinkle them lightly over with water. Then put the glass on, and when the sun shines powerfully let them be shaded with a mat till its strength is gone by. They will not require much water, the shoots being of a moist substance themselves ; and if they are much wetted, or deprived entirely of the sun, they will be in danger of suffering from damp. After they have been in about a fortnight, the glass might be occasionally removed at night for the sake of catching the refreshing dews, and replaced in the morning. When it is perceived that they are beginning to grow, and the tops have extended themselves, pinch off the extreme points of them, and they will make snug bushy plants. Even if they have not rooted, which is sometimes the case after they begin to grow, this practice of pinching off the top will help to check the rising of the sap, and cause the roots to protrude earlier than they would otherwise have done. Those who have no hand glasses, or who have more cuttings to strike than their glasses will contain, must prepare a shady border in the manner already described, and cover it with a mat, which may be removed at night for the advantage of the dews, but the shade must be renewed by nine or ten o'clock in the morning, or all the previous labour will be thrown away.

There is another piece of advice, for which I think the beginner will be grateful, and that relates to the worms and insects, which he will often find very troublesome among his cuttings. If the cuttings are annoyed by worms, procure half a bushel of stone lime, and put it into a tub with about twelve gallons of water. When it is slacked, stir it occasionally ; then let it settle till it is quite clear. After freeing the water from the scum that rises to the top, sprinkle the cuttings all over with it in the evening, about dusk, as then the worms will be either on the surface or very near it. If one watering is not sufficient, it must be repeated in a few days ; and it would benefit not only cuttings, but rooted plants in your beds, destroying the slugs and grubs, especially if done on a moist evening, when they are most numerous and early in their appearance.

PENSE.

ARTICLE III.

ON THE CULTURE OF PELARGONIUMS, (GERANIUMS OF MOST.)

BY A FOREMAN OF A LONDON NURSERY.

THE very great addition to this lovely tribe of plants, during the present season as has been exhibited at the Floral meetings, held at the rooms of the London Horticultural Society, in Regent street, at the gardens of the society at Turnham Green, and other places, will render it quite unnecessary for me to apologize for sending the following remarks on the culture of so generally an esteemed family for insertion in the Floricultural Cabinet, they are the results of my mode of treatment with a collection of above ten thousand plants which are under my charge.

Propagating by Cuttings.—Early in June I take a sufficient quantity of cuttings of the different varieties, and after carefully preparing them, by taking off the lower leaf, and cutting horizontally through the stem just below a joint, I insert each sort separate, in pots previously filled with a mixture of three parts sharp sand, and one part sandy loam, using plenty of drainage at the bottom. After the cuttings are all put in, I give a good watering, and then remove them to a moderate hot-bed, and plunge the pots to the rim ; I keep the lights shut close, except in the morning, when I admit a little air, and with due attention to shading and watering, I find them to be well rooted in about a month. Those kinds

in which we abound I prepare cuttings as above described, and prick them out in a bed of finely sifted soil, in a warm situation in the open air. By shading them for a short time they soon strike root. When this is perceived to be the case, I pot them singly into small 60s, shifting at the same time those that were inserted in the small pots. In potting I use a compost of equal parts of sandy loam, peat, and well decomposed manure, adding about one eighth part sand; when potted, I place them in a frame, where the lights are put on in the day time, in order to throw a mat over them to shade the young plants from the sun; the lights are taken off in the evening, and the plants supplied with water, until they have struck fresh root, when this is found to be the case, the lights are removed altogether, and the plants duly supplied with water. They remain in this state till the middle of August, when I carefully examine them, and shift those which have made sufficient roots into one size larger pots, being careful in this, as in all other shiftings, to use a sufficient quantity of drainage to carry off the superfluous moisture. Those plants not sufficiently rooted by that period, I defer shifting till the spring, as they succeed better when shifted at that time. After thus looking over all the plants, they are replaced in the frame, and treated the same as before, with this exception, that the lights are put on at night, and during heavy showers. About the first week in October they are removed to the greenhouse, where they receive all the air that can be admitted with a regular, but moderate supply of water. Fire heat is not used except to repel frost, or the dry damps arising from watering, or other causes; to avoid damps in a measure I find it best to water in the morning, so that the air admitted during the day assists to carry off the superabundant moisture. The surface soil in the pot is frequently stirred, and occasionally some of the old removed and renewed; all decayed leaves are removed, both on account of the well being of the plants, and to preserve neatness and order.

Potting.—The time of performing this operation is partly regulated by the state of the plants; those that were shifted in August, do not require shifting again till the middle of February, and again early in April, whilst those that were not shifted in the autumn require their first shift in February. In each successive shift I use one size larger, taking care to put plenty of drainage into the bottom, and to press the soil firm in the pots. I find the following compost to answer well: two barrowsfull of light hasel

loam, (from the surface of a rich pasture, which should be collected at least a twelvemonth before it is used,) one and a half barrowful of well rotted hot-bed manure, one barrowful of turfy peat, half a barrowful of pigeon's dung, two or three years old, and a quarter barrowful of sand, the whole being mixed in the autumn, and put under an open shed. In using it I do not sift it but it is chopped fine with a spade. As the spring advances I allow a more copious supply of water, and I find that by using liquid manure once a week after they begin to grow, the plants are greatly strengthened, and the size of the flowers increased. When the flowers begin to expand, I shade them from the sun, by rolling a canvass over the roof of the house, which contributes to heighten the colours, and they remain much longer in bloom. The plants are placed on stages, which are constructed so that the surface of the plants are not more than five feet from the glass and a free admission of air being admitted at the sides of the double roofed houses, as well as at the roof, the plants are stiff and robust. Attention is paid to placing the plants at a greater distance from each other, as they advance in growth, and thinning away the shoots so as to leave them regularly placed and properly tied to sticks so as to splay around and form compact heads.

In June the plants are removed from the greenhouses to an appropriate situation in the open air, where they receive the full influence of the sun till eleven, o'clock and by attention to watering many of them continue to bloom through the summer. Early in September, the plants are cut down to within a few inches of the pots ; and they flower well the second year.

On Raising New Varieties.—This department of their culture may prove a source of great amusement and gratification to those who can devote sufficient time to it. Good varieties may often be obtained from seed saved promiscuously from fine flowers ; yet in order to ensure success, it is necessary to have recourse to impregnation, in performing which, the following rules are strictly observed. The operation is performed with blossoms as nearly as possible, in the same state of advancement. The anthers are removed from the flower intended for impregnation in the morning, because the pollen is then moist, and not so likely to escape by accident, so as to confuse the experiment. A considerable quantity of pollen is used in such impregnation, both on account of the chance of a minute particle of the natural pollen having escaped, and also because it is more difficult to produce fecundation

with the other. Both before and after the operation, the flower impregnated is covered with a piece of thin gauze, to prevent the bees or other insects from intermeddling and rendering the operation vain. The colours of the parents are selected as distinct and opposite as possible as to colour. The plants after operation are placed in a situation in the greenhouse where they can receive the full influence of the sun. The seeds are gathered as soon as they begin to turn brown, otherwise, being furnished with a downy appendage, they are liable to be blown away by the wind; they are sown in pans or boxes, in light soil, and covered about a quarter of an inch with the same, but finely sifted, and placed in a hot bed frame. When they have made two or three pair of leaves, they are potted into small pots, kept in a greenhouse. Though few of the strongest plants flower the first summer, yet the greater part do not till the following spring.

ARTICLE IV.

ON THE CULTIVATION OF ERICAS.

(Continued from page 205.)

There is no subject in gardening more difficult to give written directions upon, than that of soils, so little, unfortunately, have they been chemically studied, so vague and unintelligible are the tests by which they are practically known. The soil which the *Ericæ* and many other fine rooted plants prefer, is called peat, bog mould, heath mould, moor earth, &c., and abounds in sufficient quantities in many places, particularly in uncultivated heaths. But of this soil there are both good and bad sorts, that is, sorts in which plants will grow to perfection, and others in which they languish and decay. Nor is it to be taken for granted that that peat which produces the finest and healthiest crops of our common heaths, such as *Erica Tetralix*, and *cinerea*, is always a fitting soil to be used for exotic plants of similar habits; for many, by contenting themselves with this test, have found out their error, when too late to remedy it. That peat is best which contains about one fourth or one fifth of coarse white sand, and is taken from a dry heathy common, which is never overflowed with water, and off a sub-soil [in which the recently discovered chemical substance, creasote, which has deleterious effects upon all vegetables, does not abound. It might be well for the cultivator to have a chemi-

cal analysis made of his soil, by which the presence or absence of creasote would be determined, and which any respectable chemist would discover for him. When abundance of sand does not naturally abound in the peat, any coarse white sand, free of iron matter, may be added. It appears to be of little consequence whether or not good peat be prepared for any previous period in the compost yard prior to using; we rather think that the sooner it is used the better. As a substitute for peat, some have recommended very rotten dung, decayed leaves, &c., having a due proportion of gritty sand added; and others have suggested the addition of very rotten manure to be used with peat, with a view to increase the rapidity of the growth of the plants. The former may be used, in default of better, for hardy American plants, but the addition of the latter is by no means to be recommended.

Water.—Soft water alone should be used for watering plants of every denomination; that from a pond or large river, or such as is collected in cisterns from the roofs of buildings, to be preferred. Water pumped from wells, and such as may be procured from springs, should be exposed for as long a period as possible to the action of the sun and air before it can be usefully applied to plants. Water impregnated with mineral matter, such as iron, salt, &c., should be carefully avoided; and that containing much calcareous matter is injurious to many plants, and to none more so than the genus *Erica*.

Shifting and Potting.—Early in spring appears, from practical observation, to be the most proper time for shifting or potting plants of this order that they may make roots during summer; but to this rule there are some exceptions, namely, the state of health of such individuals as require shifting into other pots at various periods of the year. All plants whose roots have completely filled the pots, and whose balls are hard in consequence, should be shifted into pots of one size larger. All plants that appear in a weak and sickly condition, should be turned out of the pots and the roots examined, the dead ones cut away, the sour and exhausted mould displaced, and then planted into a pot somewhat smaller than that out of which it was taken. When a pot feels heavier than usual, it is a sign that the ball has absorbed too much water, either from an excess of that element having been supplied, or, as is more generally the case, from imperfect draining. When such is the case, reduce the ball, prune the roots, and re-pot it as recommended above. The mould should be prepared by being

chopped fine, or even put through a coarse sieve, of not less than one inch in the mesh, unless, indeed, the plants be young; for very large plants, the mould may even be much coarser than that which will pass through a sieve of the above dimensions. Whether for large or small plants, it is absolutely necessary that the mould be dry at the time of potting, as should also be the pots into which the plants are to be put. It is not always necessary that new pots should be used, but care should be taken that they are clean, and selected of sizes, to suit the plants to be operated on.

In potting, draining is of the first importance; for this purpose from one to three inches, according to the size of the pot, should be filled with broken pots, cinders, small stones, chippings of freestone, or small pebbles, over a piece of potsherd or oyster shell, placed over the hole in the bottom of the pot: over this drainage a thin layer of dry moss should be placed, to prevent the finer earthy particles from being washed down, and to stop the cavities through which the superfluous water is intended to pass; and as the various species of moss, *hypna*, &c., have the property of absorbing humidity, and also of retaining it for a considerable time, the roots will by this means be kept cool and moist, much to their advantage.

In placing the plant in a new pot, it has been recommended to keep the top of the ball considerably above the level of the top of the pot; in so far as the plant is concerned, this is admitted to have rather an unsightly appearance. The rationale of this mode of potting appears to be, that it prevents the plant suffering from excess of water, as the ball at the stem of the plant is so much above the level of the part next to the pot, that the water, instead of finding its way into the centre of the ball, passes down between it and the pot, where are all the roots that are capable of absorbing it for the use of the plant; the superabundant water passing off through the drainage.

The balls of heaths, if in good health, do not require to be broken, as is necessary with some other plants; it is in general sufficient if the sides of the balls be gently patted with the hand to loosen the outside fibres, which, in healthy plants, will be found in abundance round the outside of the ball, nor should any plant be shifted until such is the case.

It appears to me that the free or luxuriant growing sorts thrive best in rather large pots, and in a peat soil not over sandy, while the slow growing and slender sorts require much smaller pots, and

a soil in which more sand abounds, either naturally or by addition ; it is also necessary that the pots into which the latter are to be placed should be completely drained. The latter also requires at all times much less water, because they are, for the most part, found indigenous in soils and on situations where little soil and less moisture abounds.

ARTICLE V.

ON THE CULTIVATION OF THUNBERGIA ALATA, AND T. LEUCANTHA.

BY CLERICUS.

WHEREVER I have seen these beautiful climbers cultivated in doors by professed gardeners or amateurs, I have invariably noticed the speckled, or sickly appearance of its leaves. This, I have no doubt arises more from the unsuitableness of the soil in which the Thunbergia is planted, than from any difference of temperature to which the plant is subjected.

The beauty of all flowers, especially those of light colours, is greatly increased by being contrasted, with a rich deep foliage. This desideratum may be obtained in the Thunbergia, by planting it, when five or six inches high, in a mixture of cow-dung and pure black peat (without sand) : the composition can scarcely be too rank. In proof of the efficacy of this mode, I may mention, that I have had it with leaves, and grown in a south window, that measured four inches in length. During the last summer I had also two other plants, raised from seed in a cold frame, which were equally healthy although later in flowering.

Thunbergias are readily raised from seeds, which should be sown singly in pots three inches in diameter ; these may be placed within a cucumber frame, kept moist ; and have as much air as possible. When the runner is six inches high, prepare a compost of equal parts, cow-dung and peat ; shake the plant and ball entire out of the small pot, and insert it in the centre of one seven inches in diameter, previously partly filled with the composition ; then add more of the moist compost, not pressing it too close, that the roots of the plants may work through the interstices to the sides of the pot ; dredge a little mould or sand on the top, to prevent too rapid evaporation ; and then the plant may either be returned to the frame, or placed in a south window, until fairly rooted, and the

weather be suitable to place it out of doors. It will bloom in about ten weeks from the time of sowing the seed. For a window or otherwise, the plants looks and thrives best if the three leads be allowed each a small neat stick to climb up, which at a yard high may form a pyramid, and the plant be stopped when at the top ; pendants will then be thrown ont, and flower beautifully.

If the red spider ever attack a plant, I turn it upside down and immerse it in soap suds for a few minutes this never fails to destroy the insect.

I have grown both the kinds very freely in the open air, planting them against a wall which has a south-east aspect. I turned them out of pots the last week in April, sheltering them a little with a net till the end of May ; the soil in which they grew was a mixture of peat and rich loam, I had some planted out into my flower beds, which are well sheltered from the prevalent westerly winds, and they too bloomed admirably ; I allowed the plants grown against the walls to twine around upright wires, placed at an inch from the wall, the shoots reached nine feet high last season and bloomed most profusely, and I scarcely need add, produced a very pretty appearance, more especially so when I had a plant of fine blue purple flowered *Maurandia Barclayana* planted, between the buff and white *Thunbergias*, the contrast was pleasing : the plants I had in the open flower beds I had trained up a central wire stem, two feet high, having a head resembling an umbrella of three feet in diameter, the shoots soon covered the surface, and hanging pendant at the extremities were very interesting.

Northampton, July 2nd. 1839,

CLERICUS.

ARTICLE VI.

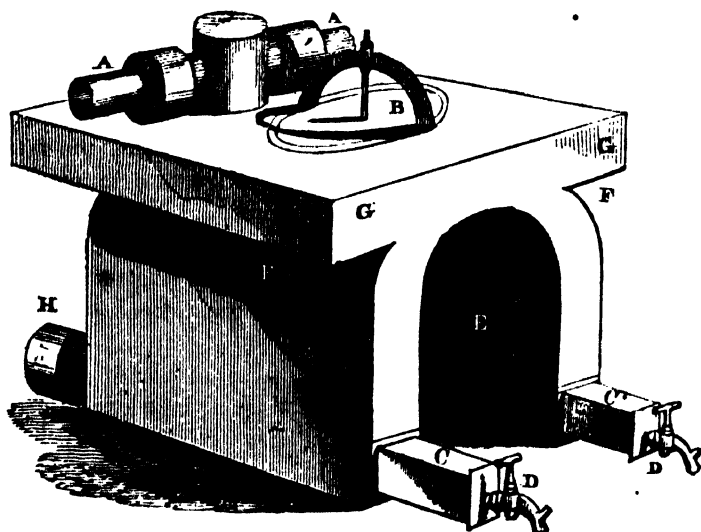
WILLIAMS AND Co's. PATENT WROUGHT IRON BOILER FOR HEATING GREENHOUSES, &c. WITH HOT WATER.

BY W. GARDENER, KNAP HILL.

PRESUMING that all subjects connected with the construction or heating of horticultural buildings will be acceptable to your numerous readers, I beg to direct their notice to the accompanying drawing of a boiler invented by Williams & Co., which in my estimation appears to possess merit peculiar to any other boiler used for heating greenhouses and other erections with hot water. The chief feature in the plan is the simple and easy mode adopted

for cleansing the inside, which appears to have been overlooked by makers of other descriptions of boilers used for the same purpose; the boiler is very compact, and every advantage appears to have been taken for the economizing of the fuel, which from the way in which the heat is caused to act upon every part of the boiler must be a very considerable saving of fuel.

Several of these boilers were erected last winter, and have given the greatest satisfaction from the testimonials which I have in my possession. The price of the apparatus does not exceed any common plan of hot water apparatuses.



A A the flow pipes. B man-hole. C C apertures of three inch square pipe, nine inch long with cocks. D D fixed on to the front with a moveable flange, to clear out the dirt, &c., from the inside. E the fire place. F the outside of the boiler forming the side flues, where the fire passes round. G the top of the boiler. H the return-pipe.

(We admire the plan adopted by the patentee in offering to guarantee the success of the boiler for five or more years. See advertisement.—COND.)

W. GARDENER.

Knap Hill, July 20th.

ARTICLE VII.

ON CHINESE GARDENS.

(Continued from page 208.)

In their plantations, the Chinese Artists do not, as is the practice of some European Gardeners, plant indiscriminately every thing that comes in their way; nor do they ignorantly imagine, that the whole perfection of plantations consists in the variety of the trees and shrubs of which they are composed: on the contrary, their practice is guided by many rules, founded on reason and long observation, from which they seldom or ever deviate.

“Many trees, shrubs and flowers,” sayeth Li-Tsong, a Chinese author of great antiquity, “thrive best in low moist situations; many on hills and mountains: some require a rich soil; but others will grow on clay, in sand, or even upon rocks; and in the water; to some a sunny exposition is necessary; but for others, the shade is preferable. There are plants which thrive best in exposed situations; but, in general, shelter is requisite. The skillful gardener, to whom study and experience have taught these qualities carefully attends to them in his operations; knowing that thereon depend the health and growth of his plants; and consequently the beauty of his plantations.

In China, as in Europe, the usual times of planting are the autumn and the spring; some things answering best when planted in the first, and some in the last of these seasons. Their Gardeners avoid planting, whenever the grounds are so moist as to endanger the rotting of the roots; or when the frosts are so near as to pinch the plants, before they have recovered the shock of transplantation; or when the earth and air are too dry to afford nurture to them; or when the weather is so tempestuous as to shake or overturn them, whilst loose and unrooted in the ground.

They observe, that the perfection of trees for Ornamental Gardening, consists in their size; in the beauty and variety of their forms, the colour and smoothness of their bark, the quantity, shape, and rich verdure of their foliage; with its early appearance in the spring, and long duration in the autumn; likewise in the quickness of their growth, and their hardiness to endure the extremities of heat, cold, drought or moisture; in their making no litter, during the spring or summer, by the fall of the blossom; and in the strength of their branches, to resist, unhurt, the violence of tempests.

They say, that the perfection of shrubs consists not only in most of the above mentioned particulars, but also in the beauty, durability, or long succession of their blossom ; and in their fair appearance before the bloom, and after it is gone.

"We know," say they, "that no plant is possessed of all good qualities ; but choose such as have the fewest faults ; and avoid all the exoticks, that vegetate with difficulty in our climate ; for though they may be rare, they cannot be beautiful, being always in a sickly state ; have, if you please, hot-houses and cool-houses, for plants of every region, to satisfy the curiosity of botanists ; but they are mere infirmaries : the plants which they contain, are valetudinarians, divested of beauty and vigour ; which only exist by the power of medicine, and by dint of good nursing."

Amongst their favourite trees, is the weeping willow, which they cultivate with great care, and plant near all their lakes, rivers, fountains, and wherever else it can be introduced with propriety ; dwarf kinds of it are raised in pots, for the apartments.

The excessive variety of which some European Gardeners are so fond in their plantations, the Chinese artists blame ; observing, that a great diversity of colours, foliage, and direction of branches, must create confusion, and destroy all the masses upon which effect and grandeur depend ; they observe too, that it is unnatural ; for, as in Nature most plants sow their own seeds, whole forests are generally composed of the same sort of trees. They admit, however, of a moderate variety ; but are by no means promiscuous in the choice of their plants ; attending, with great care, to the colour, form, and foliage of each ; and only mixing together such as harmonize and assemble agreeably.

They observe, that some trees are only proper for thickets ; others, only fit to be employed singly ; and others, equally adapted to both these situations. The mountain-cedar, the spruce and silver firs, and all others whose branches have a horizontal direction, they hold improper for thickets ; because they indent into each other : and likewise cut disagreeably upon the plants which back them. They never mix these horizontal branched trees with the cypress, the oriental arbor vitæ, the bambu, or other upright ones ; nor with the larix, the weeping willow, the birch, the laburnum, or any of a pendant nature ; observing, that the intersection of their branches forms a very unpicturesque kind of network.

(To be Continued.)

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

GESNERIA ELONGATA ; var. *Gesneria elongata*, var. (Bot. Mag.

DIDYNAMIA GYMNASPERMIA. GESNERIACEÆ.

This plant was received at the Botanic Garden, Edinburgh, in September, 1836, from the Messrs. Young, Nurserymen, Epsom, under the name of *G. oblongata*, perhaps by an error in the transcriber. It flowers most freely, exhibits a long succession of blossoms, and is therefore very desirable in cultivation. It differs from *G. elongata* of Humboldt in its much shorter peduncles, in the more obtuse base of the leaves, in its less angular branches, in the colouring of the veins and lower surface of the leaves generally, and in the subulate segments of the calyx. In these respects, it more nearly agrees with *Gesneria mollis*, but from this it differs again, and agrees with *G. elongata*, by its four flowered umbel and much shorter pedicels, and the bractæe opposite at their origin; the length of the peduncle being intermediate between its state in these two species. There are very many forms of *Gesneria* from the tropical parts of America, but I cannot think they ought all to be considered as species. This opinion is strengthened by the figures and descriptions of Humbolt, and the inspection of our present plant, which leads me to suspect that it may connect together as varieties *G. mollis* and *G. elongata*.

Whole plants villous. Stem (five feet high) shrubby, much branched; branches ascending. Leaves (three to six inches long, and one and a quarter to two and a quarter broad) opposite and decussating, petiolate, lanceolate, acuminate, neatly and subequally serrated, somewhat harshly pubescent and bright green above, white with soft tomentum below. Umbels four flowered, villous, shorter than the leaves; peduncle shorter than the petiole; pedicels about two thirds of the length of the peduncles; bractæe two, opposite, lanceolate, at the subdivision of the umbel. Flowers unilateral. Calyx with small, spreading, ovatosubulate segments. Corolla (one inch long, half an inch across) tubular, clavato-ventricose, dilated and somewhat fleshy at its base. Stem contracted, and after being dilated, again slightly contracted at its mouth; villous on the outside, glabrous within; limb spreading, lobes subequal, rounded, crenate. Stamens inserted into the base of the corolla, and rising to the throat; filaments pubescent; anthers divaricated at the base, where the connective is dilated, cucullate and fleshy, fifth stamen rudimental. Pistil pubescent; stigma minute, truncated; style bent at its base, compressed; germen more than half imbedded in the adhering calyx, and surrounded at its free apex with five glands. Ovules numerous, and minute.

ONCIDIUM PULVINATUM. Cushion Oncidium. (Bot. Reg. 42.

GYNANDRIA MONANDRIA. ORCHIDACEÆ.

W. Harrison, Esq., sent this charming species from Rio Janeiro, in 1834, to R. Harrison, Esq., of Aighburgh, near Liverpool. It is equal to *Oncidium altissimum* in stature, producing a panicle of numerous flowers, three yards long. The flowers are one inch across of a golden yellow, marked and spotted with blood colour. It is a very desirable species.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON PANSIES.—When is the time to increase Pansies, so as to have them in a condition the best adapted to endure the winter? Is it usual to keep them through the winter in the open air, or to preserve some of the choice kinds in the greenhouse? P.

(Thrives best in pots, kept in a cool frame.—COND.)

ON GERANIUMS, &c.—Having a little collection of plants growing in beds, but which are principally Geraniums, would you, or any of your readers, be so obliging as to inform me, through your Magazine, how I can preserve them in the winter, having neither frame nor pot. Do you think cutting them down as soon as they have bloomed, and, about October, burying them in saw-dust, would succeed? LOUISA.

(We have seen that mode tried and the roots kept alive, but they grew very weakly the following season. It is far preferable to take the plants up, and place them as close as possible in a wicker basket, or box, and after filling up with soil, water them, and they may be kept in a cellar or kitchen, where it is cool; and plant out in spring.—COND.)

ON THE CRITERION OF A DAHLIA FLOWER.—The Conductor of the Cabinet would oblige many of his readers by informing them whether it is proper to take out the eye, (centre) of a Dahlia flower, before shewing it at an exhibition, and whether a flower so treated should be disqualified or not?

The question is asked in consequence of a dispute about the matter; one party considering it right to "take as much of what is judged to be defective from a flower as the person pleases, but, add nothing to it; whilst the other party contends, "let the flower be as it naturally grows, to be so taken from the plant, and thus exhibited.

If the latter be the condition, not even a defective petal can be allowed to be taken away without violation of the rule, in which case a pan of flowers in a perfect state would very rarely be seen. An answer in the September Cabinet will be esteemed a favor by HOPE.

(It is certainly not only our own decided opinion, but one, we believe, pretty generally admitted amongst growers, that every Dahlia bloom having the centre taken out is totally disqualified, and that a bloom having only some one or two defective petals extracted is not disqualified, and for several reasons, a primary one of which, is, that there are several kinds of Dahlias very rarely producing blooms without an imperfect centre, the taking out of such, and causing the inner petals to close over and conceal the hollow made by taking out the eye, deceives the spectators in a very material point, being an artifice, which, (from the circumstance of their being prohibited to touch a flower,) they are not likely to discover. By the deception thus practised, a false impression of the qualities of a flower is received and subsequently a number of plants are ordered, in many cases, solely to grow for competition, at exhibitions, these when blooming, not only create much dissatisfaction, but, depending upon what appeared positively to be a good

flower, the parties being misled are thus prevented having desirable flowers to shew, and thereby excluded from having a fair chance of obtaining the prizes. We have known several instances of this sort. If the evil was not even of a greater extent, than an attempt by disguise to deceive the censors, as it might do in instances where the exhibition is of great extent, and sufficient time is not allowed, so as to have an opportunity of minutely examining into the centre of each bloom. Not only the bloom so operated upon, or stand containing such bloom or blooms, should be rejected; but the exhibition of such ever after excluded the society, if it is ascertained he previously understood such proceedings would not be tolerated. In order to prevent any disputes of this kind, there ought to be a rule relative to it, and embodied in the general rules of the society, and also printed on the schedule of particulars.

With respect to extracting defective petals, it is perfectly admissible, and to which no individual can reasonably object, as it does not make any material alteration whatever in the general character of a flower. Every grower knows that in the most desirable and perfect kinds, imperfect petals are from some causality frequently produced, the removal of which adds to the symmetry of the bloom, whilst at the same time it does not give a false impression as to its real character. When such a deformed petal is discovered in a bloom intended for exhibition, it is usual to remove it immediately and not leave it to remedy when about to be shewn.—COND.)

REMARKS.

ON CHINESE GARDENS.—The article on the Chinese Gardens is entertaining; when you have given us the whole; let me suggest to you the Gardens of another country which it would not only be entertaining but useful to obtain very minute particulars of. I allude to the winter gardens of Russia: with the few hours of day light and their severe winters, how are they managed? what degree of heat compensate for want of sun? and what plants are placed in them? these are particulars which you could obtain for us: would be most highly welcome to every gardener we should acquire more information in the department of forcing than we now possess. And every person of large fortune would be desirous of possessing a conservatory so constructed that he could walk or sit there, surrounded by shrubs and odiferous plants, in the chill, damp and dreary days of December and January when no comfort could be found out of doors, in the streets, or fields. Or lighted up in the evening it might be made delightfully attractive by blending with plants and flowers, beautiful statues, vases, &c., in another retreat, the open fires that heat the flues may form a room surrounded with cases of stuffed specimens of Nature, history, Books &c on the subject; in another, fossils and minerals. The centre colonnade would admit of any degree of Length, or width for a promenade of affording plenty of exercise.

A WORKING GARDENER. .

(We will attend to the suggestions of our Correspondent.—COND.)

It has often struck me, that fruit and seeds might be protected from the depredations of birds, by placing imitations of cats and hawks, made of wood and painted in proper colours, with glass eyes, under the bushes; and if the heads were made (like the Chinese images) to nod with the wind, it would give the appearance of life.

CLEMATIS, SIEBALDII and CLEMATIS CÆRULEA GRANDIFLORA.—Are found to be perfectly hardy, both kinds having stood through winter, planted at the foot of a south aspected wall, and not having any other protection. We have seen plants pushed three or four feet high this season May 30th, and in profuse bloom. Such valuable acquisitions to our hardy climbers deserve a place wherever practicable. They grow freely and bloom profusely. Nothing more is required in their treatment than to be planted on a dry

sub-soil, and have a rich loamy soil. We have recently seen some fine specimens grown in the greenhouse, and trained to various formed wire trellis's, they had a beautiful appearance; one plant, *G. Siebaldii*, had near three hundred flowers upon it. Trained up a post to a wire frame in a flower garden or along a fence round a flower bed it would be beautifully neat.

The most common method of propagating these plants is by layers. By securing each bud of the shoots to be layered at a trifling distance below the surface of the soil, they will soon push root, and by the severance of the shoot between the buds, a quantity of plants, equal to the number of buds, will be obtained. A very quick mode of increase however, is that of grafting, them into the stock of the common kind of clematis. A young shoot (not too tender) inserted into a strong stock, soon unites and grows rapidly. Inarching the kinds upon a common and vigorous sort is the most certain and quickest mode of increase, and where practicable should be resorted to. Cuttings of the old shoots are struck with difficulty, and young ones often damp off; when plants are obtained by cuttings, they are not so liable to be lost as grafted or inarched ones are, for if even cut down, by a very severe winter, or other casualty, to within a few inches of the ground they will push again, but when a plant raised by the other modes dies down to where it was inserted the kind is lost.—(CONTD.)

VEGETATION OF THE CAPE OF GOOD HOPE AND VAN DIEMAN'S LAND.

How I thought of you at the Cape, that Paradise of flowers! though the first bloom was over on our arrival, yet enough was left to show what had been, nor without seeing can you imagine the profusion; there are actually no weeds. Our favorite little blue *Lobelia* is the chickweed of the place the ditches and all damp places are filled with Cape Lillies. Heaths of all colours, the *Erica*, I believe coccinea, growing very high, *Diosmas*, *Crassulas*, &c. &c. I saw a great deal of the Cape, we were above a fortnight there, and travelled above a hundred and eighty miles into the interior. With the general appearance of the country I was disappointed, there are no trees. The silver tree, a *Protea*, is the highest indigenous plant that I saw. There are oaks in and about Cape Town, Constantia, Wynberg, &c. and indeed wherever a house is built, a few trees are planted for shade, but the country for miles has nothing higher than heath, and for the greater part of the year is sterile looking. But in the season the whole face is covered with flowers; and such a face! fancy acres of heaths, of all colours, interspersed with *Gladiolas*, *Ixias*, *Watsonias*, *Babianas*, *Lachenalias*, &c. without end, all growing and flourishing in their native luxuriance. Some bunches of *Mesembryanthemums* near Sir Lowry Cole's pass were actually too bright to look at. I lived in one constant whirl of delight, that ecstasy in which we behold perfection. I could not see fast enough. Most of the *Ixias* were out of bloom, but their remains were like patches of a hay-field in seed, only the stems closer together. Myrtle hedges were eight and ten feet high; the one I saw at Sir John Herschell's must have been more, and as close and substantial as our best holly hedges. We visited Villette's and Baron Ludwig's garden, but where the whole country is a garden, these were of less interest. The *Melia Azedarach*, with its sweet lilac blossoms, is a beautiful and ornamental tree which I did not see wild. We visited the Constantias; Great Constantia is beautiful, the soil is white, and looks like lime and sand intimately mixed. I thought of our gardener's recommendation of lime rubbish for vines.

To the Cape, Van Diemen's Land is a direct contrast. This is a country of hills, fringed to the very top, and perhaps about the thickest vegetation in the world. All is evergreen, and one dense mass of gloom. At first sight it is sombre enough, but like a dark beauty it has its charms: the wood is chiefly "gum" (*Eucalyptus*), growing to an immense height, and throwing its long white arms about in a wild *Salvator* style. The young "gums" are beautiful, and their new shoots of reddish brown lightening into a paler hue, and deep-

ening into myrtle green, with the light new shoots of the "wattle" (*Acacia*), give a rich beauty of colouring, delightful to the eye of a painter. Nature here must be painted to the life, there is nothing to soften.

There is a harshness and dryness in the texture of vegetation here that is very peculiar; even their kangaroo grass (*Anthistiria australis*), which is considered so nourishing, is hard and hairy, or rather wiry. The flowering shrubs are extremely pretty, but the flowers are very small. The *Epacris impressa* is in great quantities every where; but Heaths have not as yet been successfully cultivated here, and there are none native. The soil is very dry. But cultivation of any kind is only creeping in; a Horticultural Society has this last year been formed at Launceston, and it is to be hoped knowledge and emulation may thus be excited; hitherto sheep, sheep, from one end of the country to the other, with little more cultivation than each farm requires, and cheap, and labour dear, have caused this state of things; but the minimum price of land is now raised, and most of it is so bad that its value is far below that. Settlers must now rent from the great landholders, and the resources of the country must be made available. With science and judgement every thing and any thing may be done here: wherever English trees are planted there they flourish, but they are few and far between. The Sweetbriar is now seen in the woods, and grows to an immense size. The quantity of flowers and fruit, such as they are, is beyond belief, but there are none of the best kinds. Think of grafts here bearing the first year; an earnest of what might be. I succeeded in bringing here alive, but in bad health, the Lillies of the Valley which you gave me; four leaves are green, the only morsel in the Southern hemisphere.

NEW AND RARE PLANTS,

Recently noticed at various Nurseries and Floral Exhibitions.

(Continued from page 215.)

Acacia cuneata.—This plant, from the Swan River, has been raised at Vienna by Baron Hugel. It appears to have glaucous wedge-shaped truncated phyllodia, and solitary yellow capitula, whose peduncle is nearly half the length of the leaf. It does not entirely agree with the definition given by Mr. Benthams, both the angles of the phyllodia being tipped with a spine, the midrib forking above the middle, each of its arms being directed towards an angle, and the peduncles being much longer than the stipules, as well as much shorter than the phyllodia.

Conostylis juncea.—A rigid herbaceous plant, with leaves from six inches to a foot long, at the base of which grow heads of campanulate erect flowers. The tube of the perianth is yellowish green, covered with harsh hairs; the limb is divided into six, equal, acuminate segments, deep yellow at the base, whitish at the point, the stamens are six, and inserted equally into the throat of the perianth. It is a pretty greenhouse herbaceous plant, found on the south coast of New Holland by Baron Hugel, and raised at Vienna, where it has flowered.

Centaurea pulcra.—This most beautiful annual has been raised in the garden of the Horticultural Society from seeds collected in the north of India by Dr. Falconer. The leaves are narrow and hoary. The scales of the involucre are green, bordered with a silvery pectinated margin; the flowers are the deepest blue in the circumference and violet in the centre. No plant can be more worthy of cultivation as a hardy annual.

Dichæa ochracea.—A small Demerara plant, with narrow leaves, and pale yellow-ochre-coloured flowers. Messrs. Loddiges obtained it from Demerara.

Epidendrum Candollei.—The flowers are of a dull brown, with a dull yellow lip, striped with the same colour. It is a Mexican plant.

Erysimum Perofskianum.—This very pretty hardy annual plant, with bright orange sweet-scented flowers, has been raised in the garden of the London Horticultural Society, from seeds collected in the north of India by Dr. Falconer.

Grevillea Thelemaniana.—A beautiful New Holland shrub, with numerous racemes of crimson flowers, and narrow pinnatifid leaves. It has recently been raised at Vienna by Baron Hugel.

Glaucium rubrum.—This plant, a native of Asia Minor, and of Rhodes, is now a common biennial, under the name of *G. elegans*. It has handsome poppy-red flowers, not so large, but much richer than those of the common horned poppies.

Malva mauritiana.—This beautiful hardy annual, a native of Algiers, has lately been recovered by the French, who have dispersed it under the name of the Zebra Mallow. It has pale blush flowers, deeply stained with rich purple veins.

Oncidium unicorn.—This is a pretty little species, with a compound straggling raceme of pale yellow flowers. The singular horn on the lip, to which it owes its name of the "Unicorn," at once distinguishes it from all species previously described. It has bloomed at Messrs Rollinsons.

Papaver amœnum.—A beautiful annual poppy, raised by the Horticultural Society from seed sent from the north of India by Dr. Falconer. Its leaves are smooth and glaucous: its petals a most brilliant vermilion pink with a whitish base.

Pimelea prostrata.—This is a little shrub, with small decussating glaucous smooth leaves, hairy branches, and little lateral heads of white flowers, called in the gardens *P. novæ zelandiæ*. It is said to be a native of arid mountains in New Zealand. Its appearance is neat and pretty, but by no means showy.

Saponaria perfoliata.—An annual, with small pink flowers.

Veronica formosa.—This pretty small-leaved shrub, white-flowered, ever-green and hardy, inhabiting the highest mountains of Van Diemen's Land, has lately flowered in the garden of the Horticultural Society. Its power of existing in water only is quite extraordinary.

Wistoria atrosanguinea, synonym, *W. floribunda*.—Seeds of this new species were sent to this country from Australia, by Mr. Drummond; we have not heard of its blooming in this country yet, but specimens of its flowers have been received from Australia, and were in form like the *W. Sinensis*, but somewhat larger, and of a deep blood colour. It will doubtless prove a valuable acquisition to that class of plants; we saw a fine plant of it at the Clapton Nursery.

Cæloquesia aromatica.—A greenhouse plant of some merit, not yet bloomed in this country that we have heard of. Mr. Low possesses it.

Banisteria tenuis.—A greenhouse climber with yellow flowers, and is showy when in bloom, it is well deserving a place with that interesting tribe (climbers) of plants. At Mr. Low's.

Kennedya inophylla.—Plants of this new and fine species are now to be had at one guinea each. Its fine coloured flowers, produced plentifully, recommends it to every collection of greenhouse plants. All the *Kennedya*s are most desirable plants for training up pillars, or over a wire frame of interesting form. At Mr. Low's.

Epacris onosmifolia.—This new species has not bloomed in this country that we have heard of, we saw a plant of it at Mr. Low's.

Fabiana imbricata.—This new plant very much resembles a white-flowering *Erica*, somewhat resembling *E. Bowellii*, or a white flowering *Menziesia polifolia alba*, but having larger flower. The habit of the plant is that of the latter; at present it is very rare, but when seen in profuse bloom it is very interesting, and will merit a place in every collection. We saw it at the Tooting nursery, it is also in the collection of Messrs. Lucombe and Pince, Exeter.

Anigozanthus Manglesii.—We saw some fine specimens of this interesting plant in bloom at Mr. Henderson's, Pine Apple Nursery. Captain Mangles Lt. N. has greatly enriched the collections in this country by many valuable acquisitions from the Swan River, and other places; and the floriculturalists of this country are under great obligations to that Gentleman for the disinterested zeal, and great expence, that he has incurred, therein. The flower of this species we saw in bloom, and referred to above, has a green coloured limb, and the tubular part is of a bright scarlet, and very densely clothed with red hairs. It is ornamental for the greenhouse, and equally so when grown in the open bed during summer.

Dilwynia Speciosa.—A very showy flowering new species, well deserving to be in every greenhouse; the neat yellow and red flowers produced; being very showy.

Lillium Tenuifolium.—The flowers of this species are of a deep-red, each blossom being about two inches across, of the turban form. The plants we saw at Mr. Low's were grown in the Greenhouse, and the flower stem about half a yard high; but it is very probable that it flourishes in the open border during summer. The small, neat, and fine coloured flowers, strongly recommended it to any collection.

Lillium Thunbergianum.—We saw this new species at Mr. Low's but it was not in bloom.

Arbatus procera.—This fine leaved species, Mr. Low informed us, is quite hardy, it merits a place in every shrubbery, its leaves being not only large, but of a fine green.

Arbutus tomentosa.—This is found to be hardy, it is very singularly covered with hairs, plants are offered by Mr. Low at two guineas each.

Pæonia festiva albiflora.—Mr. Low possesses this new and fine plant, the flowers are delightfully fragrant, very large, and showy, they are white, with a tinge of crimson on the edge of the petals. The price per plant is twelve guineas.

Kennedya Nova spec.—Some time back we received seeds of this new species from Edward Young Esq., Caddington, near Newark; and have been successful in raising a plant. We have been informed by a gentleman who has seen the species in bloom, that the flowers are of a very large size, and of a fine scarlet colour; the plant is a very vigorous grower, with the habit of the *K. rubicunda*, but of more rapid growth, and producing numerous branches. It is said very far to exceed in beauty any other species yet discovered. Its large fine scarlet and numerous produced flowers, rendering it very showy.

Tweedia grandiflora.—The plant in its appearance is very like *Pœonica tenifolia*. The flowers are of a pale blue rosy purple.

Rossia.—Mr. Henderson had in bloom three new species of this neat and interesting tribe, the flowers of one was entirely yellow, another, nearly all of a dark brown with a yellow keel, each kind is very pretty and when to be purchased deserve a place in every greenhouse.

Nuttallia cordata.—This pretty species has bloomed at the Nursery of Mr. Young's Epsom. The flowers are of a pretty rose colour and when grown in contrast with the higher coloured kinds, produced a pretty effect.

Nuttallia Malvifolia.—Mr. Young also possesses this new species, but we understood it had not bloomed with him.

Epacris ceriflorus.—This very neat flowering species produces its beautiful white flowers in a dense mass, in spikes of a foot or upwards long. It ought to be in every greenhouse.

Viburnum Japonicum.—A very fine species, with leaves about ten inches long, and four broad, of a fine deep green. If this prove hardy, it will be a fine addition to the shrubbery. This species is growing in the collection at the Epsom Nursery.

Ruelzia fragrans.—A hardy evergreen Shrub. The plant has a powerful scent like *Pot Marjoram*. This is in the collection at Epsom.

Bauhinia forficata.—A leguminous flowered plant, recently bloomed in the stove at the Glasgow Botanic Garden. The flowers are about six inches across, of a pure white, produced on a pendant raceme of ten or twelve on each.

Clethra tomentosa.—It appears to be known too as a variety of the *Clethra admifolia*, that kind it appears inhabits the middle and northern states of America, whilst the present kind is only found in the southern states. It is a pretty flowering hardy shrub producing numerous erect, long racemes of white flowers; it well deserves a place in every shrubbery, as does the *C. admifolia*. The flowers are not only pretty, but very fragrant. The shrub grows about a yard high, bushy; and blooms from July to the end of the summer.

Dendrobium bicamuratum.—Has bloomed in the collection of George Barker Esq., Springfield, Birmingham. It had been collected in India by Mr. Gibson, for the Duke of Devonshire, the flowers are produced in fours, small, of a dull yellow, spotted and streaked with purple.

Gongora nigrita.—Imported by S. Rucker, Junr. Esq., Streatham Hill, from Demerara. The flowers are in colour of a deep puce coloured velvet.

Spirea cuneifolia.—Discovered in the cold parts of India, and seeds sent to the Hort. Society. It is found to be a hardy shrub, producing numerous compact, corymbose panicles of white flowers.

Spirea vacciniifolia.—Also obtained from India and found to be hardy producing compact panicles of white flowers.

Spirea laxiflora.—Also from India and hardy. The flowers are white but are produced in loose shaggy panicles.

FLORICULTURAL CALENDAR FOR OCTOBER.

PLANT STOVE.—Plants of Cactuses that have been kept in the open air or greenhouse, now put into the stove, will bloom immediately.

GREENHOUSE PLANTS.—Those plants that were removed into the greenhouse last month, should have plenty of air given them every mild day; but the lights should be close shut up at night, also when cold, damp, wet, or other bad weather prevails, excepting a little at the doors about the middle of the day. The plants should not be watered in the broad-cast manner, as it is termed, but should be attended to singly, so that no plant may be watered, but what is actually dry. To water in the evening is detrimental to the plants and ought to be avoided. Camellias, if wanted to flower early, should now be placed in a stove.

FLOWER GARDEN, &c.—Auriculas must now be removed to their winter quarters and all dead leaves picked off. Carnation layers potted off should be placed for protection during winter. Offsets of the herbaceous kinds of *Calceolarias* in beds or borders, should now be potted off. Cuttings of all greenhouse plants that have been grown in the open border, in bed, &c. such as *Heliotropes*, *Geraniums*, shrubby *Calceolarias*, should be taken off as early as possible in the month, and be struck in heat, in order to have a supply of beds, &c. the next year. *Hyacinths* and other bulbs, should be potted early in the month for forcing. Seeds of *Schizanthus*, *Stocks*, *Salpiglossis*, and similar kinds of plants wanted to bloom early next season, should be sown the first week in the month in pots, and be kept from frost during winter. Perennial and biennial flowers may be divided, and planted off where intended to bloom next year. A cover of soil round the roots should be given to *Dahlias*, lest a sudden frost coming should injure the crown buds. Seeds of all kinds of flowers not yet gathered, should be collected early in the month or they will be liable to injury by frost.

(REFERENCE TO PLATE.—See next month.)

THE FLORICULTURAL CABINET,

NOVEMBER 1st, 1839.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

REMARKS ON FLOWERING TREES AND SHRUBS.

BY CLERICUS.

THERE is perhaps no season in which the flowering shrubs of British Gardens make so brilliant a display as in May, June, and July, particularly in the latter month, from the addition of the rhododendrons and roses. In this respect we have great advantages over our ancestors, for nearly all the most beautiful of our flowering shrubs are of modern introduction. The different ornamental kinds of Ribes, the American barberries, and many other of our most beautiful shrubs, have been introduced since 1824, and two thirds of the remainder since 1810. It is amusing and scarcely credible to see how very few ornamental shrubs and low trees were known to our ancestors. In the days of Queen Ann, and of George I., almost the only ornamental trees and shrubs were variegated hollies, and a few of the commoner kinds of roses. What our ancestors wanted in the variety, and, we may add, quality, of their shrubs, was however, made up in the great quantity of each sort that was planted. High box, yew, or holly hedges, wildernesses of hornbeam, and bowers of roses, were the staple ornaments of their pleasure grounds, and a few lilacs and laburnams were introduced by those who wished it to be thought that they possessed a taste for botany. During the whole reign of Ann, according to Loudon's "Arboretum Britannicum," not above half a dozen flowering shrubs were introduced; and in

the reign of George I. not above nine or ten more. About the middle of the century, the American rhododendrons and kalmias began to be planted in English gardens; and from that period to the present time, the taste for, and, consequently, the importation of foreign trees and shrubs have increased so rapidly, that between 1811 and 1830 above seven hundred new ornamental trees and shrubs were introduced into British pleasure grounds. The finest trees and shrubs of these introductions have also speedily become well known and in general cultivation, and instead of lingering for a century or two as formerly, in the hands of a few individuals, they are now found to spread in a few years, even before they have lost the first freshness and bloom of their novelty, into cottage gardens; and the demand increases so fast, that collectors are at this moment in almost every unexplored region of the globe catering for the vigorous appetite that has been created.

One of the most beautiful, and, at the same time, one of the most numerous, families of flowering shrubs now cultivated in our gardens, consists of the numerous species belonging to the genus *Ribes*. Nearly all the ornamental species of this genus are of quite recent introduction. Till lately, but few persons had any idea that the genus *Ribes* included any plants worth cultivation but the common gooseberry and the red and black currants; for though some few other species were introduced about the middle of the last century, they were not sufficiently ornamental to attract general notice. In 1812, the first really ornamental kinds of *Ribes* were introduced, viz. those with yellow flowers. The handsomest of these (*Ribes aureum*) has large golden yellow flowers, which generally appear in May, and which are succeeded by blackish yellow fruit, very inferior to the common currants of our gardens in size and flavour. The shrub grows from four to six feet high. The common yellow-flowered currant is one of the earliest flowering kinds, but there is a variety of it which does not flower till the middle of June.

In 1822, *Ribes multiflorum* was introduced; and though its flowers are green, they are, perhaps, more beautiful than those of any other species, on account of the long and elegant drooping racemes in which they are disposed. This species flowers a fortnight or three weeks later than the other kinds, and it is one of the very few species of this genus that are found wild in Europe, it being a native of Croatia. Though a most abundant flowerer,

it seldom produces fruit : and the fruit, when it does appear, is a red currant of small size and very little flavour ; the leaves are large and handsome ; and the whole shrub, though seldom growing to a large size, forms a vigorous, healthy-looking and compact bush. It is comparatively little known ; but it is sufficiently common in the nurseries to be sold at a low price : while, as it is quite hardy, it requires very little care in its cultivation.

Ribes sanguineum, the red-blossomed currant, was introduced in 1826 ; and when we look at the immense number of these shrubs lately planted in the Horticultural Society's garden, and consider how many are scattered over the country, it seems scarcely credible that so short a time has elapsed since its introduction. The history of this shrub is rather curious ; it was discovered about fifty years ago on the north-west coast of America, by Archibald Menzies, Esq., who was surgeon and botanist to the expedition under Captain Vancouver. But though this gentleman brought specimens of the flowers to England, no farther notice was taken of the shrub ; and it was never introduced till seeds of it were sent home by Douglas in 1826. There is a variety of it now sold with flowers of a fine scarlet colour. *Ribes speciosum* was discovered by Mr. Menzies in the same manner, and specimens of it brought home, though the living plant was not introduced till 1829. The flowers of the latter plant are scarlet, and bear a slight resemblance to those of the fuchsia ; but they are too small, and too widely apart to make so brilliant a show as those of *Ribes sanguineum* ; the fruit of *Ribes speciosum* is a gooseberry, but it has no flavor ; that of *Ribes sanguineum* is a black currant, resembling in appearance and taste a bilberry. *Ribes glutinosum* is only a variety of *R. sanguineum*, with paler flowers, and a slightly viscid stem. *Ribes malvaceum* is another variety, with flowers that have a lilac tinge ; and there is another variety of *Ribes sanguineum*, which is always acknowledged to be such, and which has deep scarlet flowers.

Ribes niveum, introduced in 1826, and *Ribes cereum*, in 1827, have white flowers ; those of the latter species being sufficiently large to be showy. The leaves of *R. cereum* are round, and covered with a white waxy substance, whence the plant takes its name. *Ribes nivum* is almost the only ornamental species of the genus that has a palatable fruit ; it is one of those species which form a link between the currant and the gooseberry ; it resembles in form, colour, and manner of growth, a black currant, but when cut open it is decidedly a gooseberry. It has a very agreeable and

somewhat perfumed flavour; and though rather too acid to be eaten raw, it is excellent in pies and puddings.

Ribes punctatum has bright yellow flowers, and fragrant evergreen leaves. It is a native of Chili, introduced in 1826, and is too tender to live without a wall in England. It is yet scarce, and it has never ripened fruit in this country; though, as it throws up suckers, which no other gooseberry does, it is easily propagated. It is very ornamental, and in warm sheltered situations it is certainly well worth cultivating.

The *Escallonias* are pretty little shrubs, introduced since 1827; the flowers of which, taken separately, bear some resemblance to those of the currant. *Escallonia rubra* has red flowers, produced singly, or in very small side bunches; and *E. montevidensis* has white flowers, produced in a large handsome terminal bunch.

The family of flowering shrubs which may be considered next in beauty to the currants consists of the Barberries and Mahonias: these are very numerous, and they are all beautiful, though not half so much cultivated as they deserve to be. Every body knows the common barberry, (*Berberis vulgaris*), though but few persons are aware of its numerous varieties, the fruit of some which is sweet,—of others, seedless,—and of others yellow, white, violet, black, or purple. The barberry bears rather a bad reputation, from its alledged power of infecting corn growing near it with the mildew. Modern botanists have, however, proved that the parasitic plant, vulgarly called the mildew, which attacks the barberry, is of a different genus to that which attacks wheat.

The pretty South American barberry (*Berberis dulcis*), which was introduced, in 1831, from the Straits of Magellan, has drooping, bell-shaped, yellow flowers, hanging on long footstalks. The berries are sweet, round, and black, not unlike black currants. The plant is quite hardy and evergreen.

The Nepal barberries (*Berberis floribunda*, *asiatica*, and *aristata*) are all very handsome bushes, and produce abundance of flowers. The fruit of *Berberis aristata*, called Chitria by the natives, is dried in Nepal, as grapes are in Europe to make raisins. *Berberis dealbata* is a Mexican species, with evergreen leaves, which are of a glossy green above, and white below, and scarcely any spines. This species is very scarce and dear, it being sold last year at a guinea a plant.

The common ash barberry (*Mahonia aquifolium*) has glossy, holly-like leaves, and upright racemes of rich yellow flowers; it

is a native of North America, and was introduced in 1823. This species was ten guineas a plant as late as 1830, but plants may now be procured in the nurseries at 3s. 6d. or 5s. each. This rapid fall in the prices of new plants, and, in short, of every thing that is new, is one of the most striking effects of the diffusion of knowledge. Formerly, even so late, indeed, as the beginning of the present century, rare plants were only bought by wealthy individuals, and they retained the high prices at which they were originally sold for many years afterwards, because there was not a sufficient demand for them to make it worth while to propagate them extensively; now, no sooner is any thing new introduced, than it is known to every body, and every body wishes to possess it.

There are several other species of ash barberry, all of which are in the gardens of the Horticultural Society at Turnham Green, and all of which bear their large branches of brilliant yellow flowers in May and June.

The thorns begin to flower early in April, and continue till the latter end of June, the different species producing their flowers in succession; the earliest is *Cratægus purpurea*: this is not a handsome tree; on the contrary, it has a miserable, and rather astunted appearance, but its flowers are remarkable for their black anthers, and the fruit for the variety of its colours, white, pale yellow, red, and purple haws being found on the same tree. *C. nigra* is another early blossoming kind, with very small black fruit; this tree is said to attract nightingales, because, according to Mr. Loudon, "it is particularly liable to be attacked by insects, and because numerous caterpillars are to be found upon it about the time that nightingales are in full song."

In May and June appear the blossoms of the common hawthorn, and those of all its numerous varieties. Perhaps no tree has produced more varieties than this. Loudon enumerates thirty kinds, and we believe there are many more. The most remarkable of these is the Glastonbury thorn, which is generally in flower at Christmas. The Glastonbury thorn is, indeed, in leaf, flower, or fruit almost all the year; and it has, generally, all three at once on it at Christmas. The original tree grows at Glastonbury; and, according to the legend, was the staff of Joseph of Arimathea, which being stuck into the ground on Christmas day miraculously took root, and instantly produced leaves, flowers, and ripe fruit. Queen Mary's thorn has drooping branches, and long fleshy fruit,

which are good to eat. The original tree is said to be still standing, and, if this be true, it must now be nearly 300 years old.

The other varieties of the hawthorn have probably originated from seedlings observed in some hedge, and transplanted into a nursery. In this manner the new beautiful bright scarlet hawthorn was discovered, and also the double-flowered pink kind, which is so ornamental in our shrubberies, both when its blossoms first expand, and are of a pure white, and when in about a fortnight they begin to take a pinkish tinge, which deepens gradually as they decay. Some of the varieties have bright yellow fruit, and in some it is quite black; in some the leaves are shaped like those of the oak, and in others they are slender and deeply cut, like those of the fern. One kind grows stiff and upright, like the Lombardy poplar, and the branches of another kind are curled and twisted together like gigantic ringlets. In some the leaves are variegated, and in others smooth and shining: in short, it is scarcely possible to set any limits to the varieties. The red-blossomed hawthorn was one of the earliest discovered, it having been found in the time of Ray; and we may easily imagine what a valuable acquisition it must have been to the slender stock of flowering shrubs possessed by our ancestors. It is somewhat remarkable that all the red-blossomed hawthorns have not been propagated from the same tree but that several red-blossomed seedlings have been found at different times, and at different places. Nearly all the other varieties appear to have been discovered accidentally; and their number is accounted for by the fact of more plants of the hawthorn being raised from seed than of any other tree, from the great length of time that the hawthorn has been used for a hedge plant. There is a double white blossomed kind very handsome.

The cockspur thorn is a noble species, and it has some singular varieties. One of these *C. crus-galli salicifolia* has a flat head, spreading like a miniature cedar of Lebanon. A dwarf sub-variety of this, which does not grow more than five feet high, is well adapted for planting in children's gardens. *C. coccinea*, or the scarlet fruited-thorn, *C. glandulosa*, and *C. punctata*, are all well worth growing in a shrubbery, or on a lawn; and when seen together, they will be found very distinct.

The principal large-fruited thorns are *Crataegus Azarolus*, *C. Aronia*, *C. orientalis*, or *odoratissima*, and *C. tanacetifolia*. These plants are all late in flowering, seldom expanding even their leaves till the latter end of May or beginning of June, and being some-

times much later. The fruit of all of them is not only eatable, but very good. *C. Orientalis* and *C. tanacetifolia* have both whitish leaves; the fruit of the first is of a brilliant coral colour, and of the latter yellow. There is a variety of the first species with fruit of a port-wine colour; and Lee's seedling variety of the latter is one of the handsomest plants of the genus. Notwithstanding the resemblance of the leaves, these two species are easily distinguished, not only by the colour of the fruit, but by their habits of growth; *C. orientalis* being a handsome spreading tree, and *C. tanacetifolia* upright-growing.

One of the late flowering varieties is *C. parviflora*, which does not flower till late in June, and which bears pear-shaped green fruit. The leaves of this species and its varieties, and of *C. virginica*, are very small, *C. cordata* is the latest flowering of all the kinds, as it rarely produces its flowers before the middle of July. There are many other species, and among others *C. microcarpa*, with its brilliant bright scarlet fruit, and *C. mexicana*, with its large yellow fruit, looking like golden pippin apples; but we have said enough to show what ornamental plants the thorns are, not only in their flowers, but in their fruit. *Cratægus*, or *mespilus pyracantha*, may be added to the above, as it is a very ornamental shrub, not only from its evergreen leaves, but from its brilliant scarlet berries, which are so abundant as to occasion the French to call it *buisson ardent*. In short, every tree belonging to the genus is worth growing; and I am glad to see that Mr. Loudon in the "*Arboretum Britannicum*," and Dr. Lindley in the "*Botanical Register*," have contrived within the last two or three years to bring ornamental thorns into fashion.

The *amelanchiers*, the commonest species of which is well known under the name of the snowy *mespilus*; the *coteneasters* with their coral berries; the ornamental kinds of *pyrus*, including the mountain ash, the Siberian crab, the garland flowering apple-tree, and showy Chinese crab-tree; the *Photinia serrulata*, with its large showy bunches of flowers, and beautifully-tinted leaves in spring and autumn; the loquat-tree, with its large woolly leaves; the Nepal white-beam tree, and many others, deserve especial notice from the planter and landscape gardener.

Among the flowering trees of May and June may be reckoned that splendid climber *Wistaria sonsequana*, or, as some call it, *Glycine sinensis*. The flowers of this tree resemble those of the laburnum in form, but are of a delicate lilac. Nothing can exceed

the vigorous growth of this tree, or the profusion of its blossoms ; the specimen in the Horticultural Society's garden at Turnham Green extends nearly eighty yards along the wall. This splendid plant is a native of China, from which country it was brought in 1816. At its first introduction, and for a year or two afterwards, plants were six guineas each ; but they are now to be had in any nursery for a shilling or eighteen-pence.

Next to the Wistaria may very appropriately be placed the laburnums, which, notwithstanding their beauty, are now become so common as to be little valued. Some of these are sweet-scented and remarkably long in their drooping racemes of flowers. The purple-flowered laburnum, as it is called, though in fact its blossoms are of a dirty pink, is a hybrid between the common laburnum and the purple cytisus, and it possesses the extraordinary power of reproducing its parents. Trees of this kind in different parts of the country have been known to produce a sprig of the purple cytisus from one branch, and of the common laburnum from another, without any grafting, and yet each quite distinct.

The Judas tree (*Cercis siliquastrum*) is another ornamental tree belonging to the Leguminosæ. This tree produces its pretty pink flowers on its trunk and thick branches, and the flowers have a slight acidity that makes them form an agreeable dish, when dipped in batter and fried as fritters. The tree takes its name from its being supposed to be that on which Judas hanged himself ; but Gerard gravely assured us that this was not the case as he hanged himself on an elder.

The peat-earth plants belonging to the order Ericacæ are a host in themselves. The rhododendrons, the kalmias, the arbutus, the heaths, and their allied species, are all so beautiful that no garden should be without them. The rhododendrons, it is well known, vary very much in the colour, though not much in the form, of their flowers, and some of the hybrids between the Nepal tree species and the common kinds are extremely splendid. The rhododendrons are generally considered American plants ; but one of the commonest kinds, *R. ponticum*, is a native of Asia Minor. The number of varieties and hybrids of this species almost exceed belief ; between thirty and forty named kinds are in the nurseries. It has been said that honey, which Xenophon tells us produced so injurious an effect on the Greeks in their celebrated retreat, was produced by the flowers of this shrub ; but others attribute this poisonous honey to the *Azalea pontica*.

Rhododendron catawbiense, so called from its principal habitat being near the head of the Catawba, is the most common American species, and it is a great favourite, from its hardiness, and its being an abundant flowerer. The hybrids raised between this species and *R. Aboreum*, the Nepal tree rhododendron, are not only very handsome, but they are much hardier than those raised between the Nepal species and *R. ponticum*; and they stood out without protection during the severe frost of 1837-8, when all the hybrids raised from *R. ponticum* were killed.

R. maximum is the tenderest of the American rhododendrons, and the longest before it flowers. The plant also is not healthy looking. It was introduced in 1736, but did not produce any flowers in England till twenty years afterwards. There are two varieties of this species, one with pure white, and the other with fragrant flowers. Besides these there are several dwarf rhododendrons with leathery leaves, and small brilliant coloured flowers.

Some of our modern botanists include the azaleas in the genus rhododendron; and it is certain that the two kinds hybridise freely together. The commoner kinds of azalea, *A. pontica*, *A. nudiflora*, and *A. viscosa*, have produced almost innumerable hybrids, some of which are very beautiful. *Rhodora canadensis*, another plant belonging to this order, is worth cultivating for the earliness of its flowering.

The Nepal rhododendrons, and the Indian and Chinese azaleas, are very beautiful, but they require the protection of a greenhouse.

The kalmias are called by the Americans, Calico flowers; a name admirably adapted to express the peculiar appearance of the flower, which is more like an artificial flower cut out of cambric, muslin, or calico, than a real one. The different kinds of whortleberry and cranberry, the heaths, and all the newly made genera formerly comprised under the genus *Erica*, the *Andromeda* and the *Arbutus*, complete the list of these plants, all of which are splendid ornaments to the British gardens in June and July. In some places the rhododendrons and azaleas have been sown in the woods, as at High Clere and Bagshot Park. At these places and at Waterer's nursery at Knaphill near Bagshot, these plants in the flowering season are completely a blaze of beauty. The rhododendrons, grafted standard high in Waterer's nursery, so as to form

small trees with drooping branches, are particularly beautiful, and would be very ornamental on a lawn.

The roses are the last of the flowering shrubs that we shall here notice, and their beauty is so universally acknowledged, that it requires very little comment. The number and variety of the roses are not, however, generally known ; but it is a fact that Messrs. Loddiges, and Wood, of Maresfield, possess nearly two thousand named species and varieties.

Amidst this wilderness of sweets it would be difficult to choose, had not the whole mass been arranged by Messrs. Wood, Rivers, and others, under seventeen or eighteen different heads. Of the moss roses, there are twenty-four sorts, including the white moss, which is very delicate, and extremely difficult to keep alive, and the dark crimson moss, called the *Rouge du Luxembourg*. Of the cabbage or Provence roses there are twenty-five sorts ; these were the hundred-leaved roses of the ancients ; and as the flowers are, perhaps, more fragrant than those of any other species, it is from these roses that rose-water and oil of roses are generally made. The perpetual roses, of which there are fifty kinds, are most beautifully tinted with a rich glowing colour ; and they are valuable for the great length of time that they continue producing flowers. There are eighty-nine sorts of the hybrid China roses, seventy of the China roses, fifty-one of the tea-scented, and twenty five of the white roses, all very beautiful and tolerably distinct. The conserve of roses, and other medical preparations of this flower, are prepared from the damask roses, of which there are twenty-five sorts, and the French or Provins roses, of which there are ninety-nine sorts. The French rose has less scent than most of the other kinds, and yet is often confused with the fragrant hundred leaved rose, from the similarity of the words Provins and Provence. The former of these names only signifies, however, a small place near Paris, where roses of this kind are grown in large quantities for the use of the Parisian druggists.

Of the climbing roses there are fifty-three superior sorts ; and these, when trained on a wooden frame, or pegged down to cover a sloping bank, have a beautiful effect. The fairy roses, of which there are sixteen sorts, are very delicate and pretty ; and the noisette roses, of which there are sixty-six sorts, are very beautiful. Besides these, there are Macartney roses, musk roses, Isle de Bourbon roses, Scotch roses, sweet briars, and many others.

One of the prettiest of the new roses, of 1838 is the double yellow, or rather cream-colour sweet briar. There are many other flowering shrubs well deserving of notice, which I shall notice in subsequent papers.

August, 20th 1839.

CLERICUS.

ARTICLE II.

ON THE DOUBLE YELLOW ROSE.—(*ROSA SULPHUREA*.)

BY ROSA.

ON this most beautiful Rose Mr. Rivers, in his *Rose Amateur's* guide remarks, "The origin of this very old and beautiful rose, like that of the moss rose seems lost in obscurity. In the botanical catalogues, it is made a species, said to be a native of the Levant, and introduced into this Country in 1629, and never to have been seen in a wild state bearing single flowers. It is passing strange, that this double rose should have been always considered a species. Nature has never yet given us a double flowering species to raise single flowering varieties from; but exactly the reverse. We are compelled, therefore, to consider the parent of this rose to be a species bearing single flowers. If this single flowering species was a native of the Levant, our botanists, ere now, would have discovered its habitats; I cannot help, therefore, suggesting, that to the gardens of the east of Europe we must look for the origin of this rose, and to the Single Yellow Austrian Briar (*Rosa lutea*), as its parent: though that, in a state of nature, seldom if ever bears seed, yet, as I have proved, it will, if its flowers are fertilised. I do not suppose that the gardeners of the East knew of this, now common, operation; but it probably was done by some accidental juxta-position, and thus, by mere chance, one of the most remarkable and beautiful of roses was originated. From its foliage having acquired a glaucous pubescence, and its shoots a greenish yellow tinge, in those respects much unlike the Austrian Briar, I have sometimes been inclined to impute its origin to that rose, fertilised with a double or semi-double variety of the Damask Rose, for that is also an eastern plant.

As yet, we have but two roses in this division; the Double Yellow, or "Yellow Provence," with large globular and very double bright yellow flowers, and the Pompons Jaune, or dwarf Double Yellow, both successively shy of producing full-blown flowers,

though they grow in any moderately good soil with great luxuriance, and show an abundance of flower-buds ; but some " worm i' the bud " generally causes them to fall off prematurely. To remedy this, various situations have been recommended ; some have said, plant it against a south wall ; others, give it a northern aspect, under the drip of some water-trough, as it requires a wet situation. All this is quackery and nonsense. The Yellow Provence Rose is a native of a warm climate, and therefore requires a warm situation, a free airy exposure, and rich soil.

At Burleigh, the seat of the Marquis of Exeter, the effect of situation on this rose is forcibly known. A very old plant is growing against the southern wall of the mansion, in a confined situation, its roots cramped by a stone pavement ; it is weakly, and never shows a flower-bud. In the entrance court is another plant, growing in front of a low parapet wall, in a good loamy soil and free airy exposure ; this is in a state of the greatest luxuriance, and blooms in fine perfection nearly every season.

Mr. Mackintosh, the gardener, who kindly pointed out these plants to me, though the latter a distinct and superior variety, as it was brought from France by a French cook, a few years since ; but it is certainly nothing but the genuine old Double Yellow Rose.

In unfavourable soils it will often flourish, and bloom freely, if budded on the Musk Rose, the Common China Rose, or the Blush Boursault ; but the following pretty method of culture, I beg to suggest, though I must confess I have not yet tried it. Bud or graft it on some short stems of the Dog Rose ; in the autumn, pot some of the strongest plants, and, late in spring, force them with a gentle heat, giving plenty of air. By this method the dry and warm climate of Florence and Genoa may, perhaps, be partially imitated ; for there it blooms in such profusion, that large quantities of its magnificent flowers are daily sold in the markets during the rose season.

The Rose has very much engaged my attention for several years, in order to ascertain by what means the evil of the buds being injured, and dropping off might be avoided, and I am now enabled to state that if the following treatment be pursued a splendid bloom may certainly, and invariably, be obtained.

The plant requires to have a good loamy soil, upon a dry substratum, moderately enriched. It must be planted against a good aspected wall, either full south or as near as circumstances admit of the latter.

The plant must be trained as is done to a peach tree, and early in summer, when the shoots are young, a suitable portion must be secured by the wall, as is done to the peach, and all others be taking clean away.

As soon as it is perceived the shoots have embryo buds upon them, a cover of canvas, or something that will cause shade, must be fixed so as to cover the entire plant.

This shading is essential to success. If the covering is placed so as to keep the rains from the border, recourse must be had to watering, also an occasioned sprinkling by means of syringe must be given over the foliage.

When the blooming is over, the shading is no longer requisite, and its removal is necessary to palitate the ripening of the shoots for next year's supply, which is an essential point to be obtained.

My first success with blooming the rose successively was by the following circumstance. A plant was growing at the south side of a vase placed on a pedestal, around which the branches were trained. At the blooming season I found all the buds on the South (sunny side) went off in the usual way, but all that portion of the plant which was on the shady side produced perfect bloom in perfection.

It appears to me to be essential to obtain well ripened wood, and then to give shade during the period from buds being formed to blooming. These being obtained success is certain. I have a plant which now annually produces a profusion of fine flowers treated in the manner above specified.

During the first summer that I trained the plant against the wall, a considerable quantity of young shoots was produced, in order to assist the shoots that had buds upon them, I cut off all others, which amounted to three parts of them, so sudden a destitution caused all the buds to drop off, but when the shoots are stripped off at an early stage this evil is entirely obviated.

Sept. 4th, 1839.

ROSA.

ARTICLE III.

ON THE CULTURE OF CLIANTHUS PUNICEUS, AS A STANDARD PLANT.

BY CLERICUS.

THE *Clianthus Puniceus* is well worthy of a place in every collection, both for its beautiful foliage and pendant racemes of red flowers. When grown as a standard, it far surpasses in beauty

and elegance any plant I have seen of its kind : I shall mention a few words regarding its culture as a standard. Select cuttings from a plant about the beginning of May or June ; the cuttings should not exceed four inches in length, and taken from the same year's growth ; recollect that the extremity or point of the cuttings must not be pinched off. After making the cuttings, allow them to remain for a day or two before potting, to dry some of the superabundant moisture from them, which is an advantage gained by the cuttings rooting two days sooner. A 32-sized pot should be filled with white sand, and the cuttings inserted therein to the depth of two or more inches ; they will strike readily in a heat of 70 or 75 degrees ; if they are covered with a bell-glass the strike will be more successful. After struck, they should be potted off separately, in thumbs or small sixties, amongst a compost of sand, leaf, loam, with a little well-decomposed cow-dung all well incorporated together ; when potted, they should be placed in a bottom heat till they have matured roots enough to support themselves. Then they should be removed, to a more airy situation, either to a greenhouse or conservatory, and great care and attention must be paid to the repotting and watering, or without, the plants will soon form a sickly, stunted appearance. For to make good standards, all side-shoots must be pinched off as soon as they appear, training the plant up with a clear stem to the necessary height required ; then, after they have attained the required height, the tops should be pinched off ; and that causes them to throw out laterals, and these laterals again stopped, makes them still to throw out the more, till at last the plants attain a most luxuriant head, richly decorated with thick but dense pale green foliage. When treated after the above method that I have laid down, then planted out in a conservatory, amongst good rich mould, one-half fresh loam, one-quarter leaf mould, and one-quarter decomposed cow-dung, along with a little vegetable mould and sand ; all these to be well incorporated together, and a pit made for the reception of the plants three feet square, by two and a half deep, filling it up with the above composts, then insert the plant, putting it about an inch deeper than it was in the pot ; then there should be a stake of durable wood procured to fasten it to. When planted out it grows more luxuriant than in pots, and has always a more healthy appearance. When in flower, what can surpass it ? the bunches of pale red flowers hanging the one upon the other, out of a dense thicket, as it may be termed.

CLERICUS.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

 1
AGAVE SAPONARIA. The Soap Aloe.

(Bot. Reg. 55.

HEXANDRIA MONOGYNIA.

This species, unlike the gigantic kinds *A. americana*, &c., flowers very freely and does not then perish. The blossoms are produced on a long spike, and before opening, have the appearance of a tuberose spike, they are green outside and yellow within; each flower is about an inch across.

In Peru the plant is used as a substitute for soap. It requires but a simple treatment to induce it to bloom freely. It must be kept in the greenhouse, dry in winter, and watered on the return of spring; equal portions of loam and sand form a suitable soil in which it grows satisfactory. Agave, from Agavon, Admirable, alluding to its many useful purposes.

AMYGDALUS INCANA. Hoary leaved.

(Bot. Reg. 58.

ICUSANDRIA MONOGYNIA.

This species has been confounded with *A. mana*, but it is very different its leaves being thickly covered with hoariness beneath, whilst the *A. nana* is smooth on both sides; the leaves of the latter are finely serrated, and the other coarsely. The flowers are of a pale rose, each blossom being about half an inch across; the shrub is quite hardy, middle sized, and has bloomed in the shrubbery of Sir Oswald Mosley, Bart., Rolleston Hall, Derby.

ANGELONIA GARDNERII. Mr. Gardner's.

(Bot. Mag. 3754.

DIDYNAMIA ANGIOSPERMIA.

Mr. Gardener sent seeds of this pretty flowering species from Brazil to the Glasgow Botanic Garden in 1838, and plants have bloomed this summer in the plant stove; the plant appears to be half shrubby, growing erect to about three feet high; the flowers are produced at the ends of the branches, in long fracted racemes, they are of a fine purple, each having a white centre beautifully spotted with red, and being about an inch across. It is very probable it will be found to flourish well in the greenhouse, if so, it will be highly ornamental through the summer, *Angelonia*, from *Angelon*, the native name of one species.

ARISTOLOCHIA CILIATA. Fringe flowered.

(Bot. Mag. 3756.

GYNANDRIA HEXANDRIA.

Seeds of it were sent by Mr. Tweedie from Buenos Ayres, to the Glasgow Botanic Garden, where a plant has bloomed; it appears to flourish in the greenhouse; the stem is weakly, yet not climbing. The flower is of a greenish yellow outside, and internally of a deep purple brown, with yellow reticulations, which produce a very pretty effect; the edge of the flower has a fine fringe near half an inch long which has an interesting appearance.

BURRIELIA GRACILIS. Slender.

(Bot. Mag. 3758.)

SENECCOIDEÆ. SYNGENESIA SUPERFLUA.

This genus is nearly allied to *Lasthenia*; the present and two other species were discovered by Mr. Douglas, in California. The present species is sometimes grown in our flower gardens under the name of *Lasthenia Californica*; it is a hardy annual, flowering for several successive months. The plants rise from six to nine inches high, producing numerous solitary flowers, of a fine yellow, and when in masses has a very lively and showy appearance; each blossom is rather more than an inch across. It is very useful as an edging for a flower bed or border, where the plants in the bed are of an opposite colour.

DANBENYA FULVA. Tawney colored.

(Bot. Reg. 53.)

LILIACEÆ. HEXANDRIA MONOGYNIA.

A bulb of this singular flowering species had been sent from the Cape of Good Hope, but had probably been collected in Madagascar, or the East Coast of Africa, to Robert Barchard, Esq., of East Hill, Wandsworth. The flowers are produced in a central scape, and on a dense raceme, they are of a tawny colour, and produce little show.

ERYSIMUM PEROFSKIANUM. Treacle Mustard.

(Bot. Mag. 3757.)

CRUCIFERÆ. TETRADYNAMIA SILIQUOSA.

A native of Persia, and is either annual or biennial; the stem rises about half a yard high, branching, each branch terminating in a long spike of fine deep orange colored flowers, similar in appearance to a single flowered wall-flower; each blossom is about three-quarters of an inch across. The plant is found to flourish much better when grown in the open ground, being rather languid when grown in a pot. It is highly ornamental, and deserves a place in every flower garden or greenhouse; we recently saw some fine specimens of it in bloom, and doubt not but it will soon become general.

ONCIDIUM TRULLIFERUM. Trowel-lipped.

(Bot. Reg. 57.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

Imported from Brazil, by Messrs. Loddiges', where it has bloomed; the flowers are produced numerously upon a stiff and erect scape, they are yellow, marked with red; the lip very much resembles in form a bricklayer's trowel. It is an interesting and pretty species, growing freely when cultivated in the damp stove, either in a pot or secured to a piece of wood.

LUPINUS BARKERI. Mr. Barker's.

(Bot. Reg. 56.)

LEGUMINOSÆ. DIADELPHIA DECANDRIA.

This new species was obtained by George Barker, Esq., Springfield, near Birmingham, from Mexico; the flowers are produced densely upon a long spike, and are of a mixture of lilac, blue, white, and rose, in the same flower; it may be treated as a half hardy annual or as a biennial. It continues to bloom from June to the end of the season.

LELIA ALBIDA. White flowered.

(Bot. Reg. 54.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

A native of the head quarters of Mexican Orchideæ, viz., Oaxaca; it is the only *Lælia* which has white flowers. It has bloomed with J. Bateman, Esq., and Thomas Harris, Esq.; each flower is about two inches across.

PART III.

MISCELLANEOUS INTELLIGENCE.

 QUERIES.

ON CERTAIN HERBACEOUS PLANTS.—A Correspondent would be glad to know where the following plants are to be obtained, and would feel obliged to any Nurseryman who may have them for sale, to state in the Floricultural Cabinet the prices.

Claytonia virginica, *Trillium grandiflorum*, *Rhexia virginica*, *Gentiana saponaria alba*, *Pulmonaria dahurica*, *Dodecatheon giganteum*, *Statice sinuata*, *Alstræmeria ovata*, *Lilium catesbææ*, *Lilium Philadelphicum*.

He would also be very glad to know how *Belladonna* Lilies can be made to bloom well when cultivated out of doors.

September 23rd, 1839.

ON PREVENTING BULBS THROWING OUT SHOOTS DURING A VOYAGE.—Will you inform me through any of your correspondents, in what way roots, such as dahlias or bulbs, may be conveyed to the Antipodes, a four months voyage, so that they may not throw out any shoots in the interim.

August 26th, 1839.

S.

P. S. I suppose the voyage to commence about February or March.

ON THE CULTURE OF GERANIUMS.—In the Floricultural Cabinet for July, you promise your Subscribers to place before them the method of management of the splendid Geraniums exhibited at the Horticultural Exhibition the May preceding. I have been in anxious expectation of seeing the accomplishment of your promise in one of the two successive Numbers, but without success. Will you permit me to remind you of this engagement, which is looked forward to by, doubtless, many of your readers, and by no one with greater desire than, yours very sincerely,

A Subscriber from the commencement of your Work.

September 25th, 1839.

[Will be given in December Number.—CONT.]

 REMARKS.

BIRMINGHAM GRAND DAHLIA SHOW.—The fourth of these annual exhibitions took place at the Town Hall on Wednesday and Thursday the 11th and 12th of September, and for the number of exhibitors, the distance from which the flowers were brought and their great excellence, it has never, we believe, been equalled in the kingdom. The entries for showing exceeded one hundred and fifty in number, and eighty-six stands of flowers (exclusive of seedlings) were placed for competition. Mr. Edward Davis, of Bath, an amateur, was the successful competitor for the premier prize: the blooms exhibited by Mr. Sadler, gardener to Sir Charles Throckmorton, Bart., being the next best. The weather was unpropitious, but the show was attended by a very numerous and highly respectable company. The following were the successful exhibitors:

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HU

Premier Prize—Silver Cup, value £20 manufactured by Messrs. Horton and Son, High-street)—Mr. Davis, Bath, for Diadem de Flora, Bowling-green Rival, Stuart Wortley, Evans's Wallace, Royal Standard, Contender Clark's Julia, Rosetta, Eva, Ovid, Marshall Soult, Lady Flora, Grace Darling, Topaz, Conductor, Lewisham Rival, Dodd's Mary, Springfield Rival, Lady Dartmouth, Climax, Unique, Ruby, Sunbeam and Horwood's Defiance.

Amateurs, 24 Blooms.—1. Mr. Davis, Bath; 2. Mr. Sadler, Coughton Court, Warwickshire, for Royal Standard, Virgin Queen, Ringleader, Topaz, Marquis of Lothian, Gaines's Victoria, Essex Rival, Copland's Linnæus, Knight's Perfection, Welbury Rival, Suffolk Hero, Eva, Rienzi, Unique, Springfield Rival, Climax, Dodd's Mary, Bontisholl, Forsyth's Anlaby, Lewisham Rival, Rival Sussex, Ne plus Ultra, Conductor, and Duchess of Devonshire; 3. W. Searle, Esq., Cambridge, Sarah, Middlesex Rival, Countess of Torrington, Cambridge Hero, Royal Standard, Victory, Miss Johnstone, Marquis of Lothian, Essex Rival, Springfield Rival, Lady Kinnaird, Suffolk Hero, Glory of the West, Dodd's Mary, Clark's Julia, Bowling-green Rival, Lilac Perfection, Lady Homer, Lewisham Rival, Rienzi, Unique, Hedley's Perfection, Marchioness of Lansdowne, and Robert Buist; 4. Mr. Hillier, Oxford, Metropolitan Yellow, Royal Standard, Virgin Queen, Suffolk Hero, Ruby, Alpha, Miss Johnstone, Unique, Mrs. Pierpont, Bontisholl, Lady Kinnaird, Sir H. Fletcher, Eva, Springfield Rival, Queen of Jesmond, Victory, Dodd's Mary, Middlesex Rival, Warmiuster Rival, Conductor, Topaz, Rienzi, and Rosalie; 5. Mr. E. Phillips, Birchfield, Birmingham, Etonia, Don John, Ovid, Phillips's Marshal Soult, Jeffries's Triumphant, Duke of Rutland, Purple Perfection, Conqueror of Europe, Conductor, Hope, Scarlet Perfection, Lord Byron, Eva, Springfield Major, Mackett's Helena, Egyptian King, Middlesex Rival, Sarah, Rienzi, Sir H. Fletcher, Ruby, Glory of Plymouth, Oxford Rival, and Berkshire Champion; 6. Edmund Peel, Esq.: Mackett's Helena, Yellow Perfection, Middlesex Rival, Gaines's Victoria, Stuart Wortley, Tamworth Hero, Etonia, Topaz, Major Peel, Eva, Grant Thornburn, Dodd's Mary, Oxford Rival, Marquis of Lothian, Queen of Scots, Suffolk Hero, Cambridge Hero, Royal Standard, Springfield Rival, Conqueror of Europe, Knight's Victory, Unique, Bowling-green Rival, and Triumphant.

Amateurs, 12 Blooms.—1. Mr. Davis, Bath, for Western Rose, Springfield Major, Eva, Amato, Dodd's Mary, Grace Darling, Springfield Rival, Rosetta, Climax, Suffolk Hero, Julia and Royal Standard; 2. Mr. Lawes, Salisbury, Hylas, Bowling-green Rival, Knight's Victory, Sir F. Burdett, Queen of Sarum, Dodd's Mary, Cupped Crimson, Fisherton Champion, Duchess of Richmond, Ruby, Lewisham Rival, and another; 3. Rev. A. Newby, Tillbrook, near Kimbolton, Bedfordshire, Countess of Torrington, Amato, Dodd's Mary, Knight's Victory, Unique, Hope, Suffolk Hero, Conductor, Rival Sussex, Gaines's Primrose, Glory of the West, and Fisherton Champion; 4. W. C. Burman, Esq., Arden House, Henley-in-Arden, Hope, Sir R. Lopez, Conqueror of Europe, Marquis of Lothian, Unique, Duchess of Richmond, Purple Perfection, Eva, Lady Kinnaird, Sir H. Fletcher, Comte de Paris, and Coronation; 5. Mr. Burbury, Stoneleigh, Royal Standard, Cambridge Hero, Stuart Wortley, Sir J. Astley, Conductor, Hope, Ringleader, Etonia, Virgin Queen, Topaz, Suffolk Hero, and Duke of Devonshire; 6. Mr. Hillier, Oxford, Ruby, Suffolk Hero, Rienzi, Metropolitan Yellow, Unique, Rosalie, Conductor, Eva, Springfield Rival, Frances, and Middlesex Rival.

Amateurs 6. Blooms.—1. Rev. A. Newby, for Dodd's Mary, Sir J. Astley, Conductor, Climax, Rival Sussex, and Caliope; 2. Mr. Davis, Bath, Lady Flower, Horwood's Defiance, Julia, Springfield, Ovid, and Grace Darling; 3. Mr. Lawes, Salisbury, Dodd's Mary, Topaz, Queen of Sarum, Springfield Rival, Rival Sussex, and Lewisham Rival; 4. Mr. Sharp, of Stoke, near Coventry, Climax, Suffolk Hero, Sarah, Ne Plus Ultra, Topaz, and Rienzi; 5. Mr. Kimberley, of Pinley, near Coventry, Royal Standard, Cambridge Hero, Queen of Sarum, Ringleader, Suffolk Hero, and Advancer; 6. Mr. Mayle, of Bedford, Ruby, Climax, Eva, Mary, Glory of Kilbert, and Suffolk Hero.

Nurserymen, 24 Blooms—1. Mr. Shepherd, Bedford, for Ovid, Dodd's Mary, Victory, Royal Standard, Hope, Gaines's Queen Victoria, Amato, Cambridge Hero, Diadem de Flora, Lady Dartmouth, Conductor, Rival Queen Superb, Horatio, Springfield Rival, Unique, Coriolanus, Glory of Plymouth, Diomede, Climax, Ruby, Egyptian King, Eva, Bowling-green Rival, and Marquis of Lothian; 2. Mr. Mitchell, Piltown, Sussex, Advancer, Diomede, Lady Dartmouth, Climax, Miss Colt, Grace Darling, Hero of Wakefield, Lewisham Rival, Springall's Conqueror, Antiope, Queen of Sarum, Invincible, Duchess of Richmond, Ovid, Rival Sussex, Unique, Egyptian Prince, Jones's Frances, Pilate, Rienzi, Royal Standard, Maresfield Hero; 3. Mr. Catleugh, Chelsea, Climax, Ellen of Eaton, Eva, Ne Plus Ultra, Lady Dartmouth, Springfield Rival, Unique, Columbus, Bowling-green Rival, Superb Yellow, Ovid, Hope, Mount Blanc, Metropolitan Yellow, Dodd's Mary, Egyptian Prince, Masterpiece, Knight's Victory, Flavius, Duke of Wellington, Topaz, Lord Byron, and Amato; 4. Mr. Widnall, Cambridge, not named; 5. Mr. Pamplin, Hornsey-road, London, Clark's Julia, Suffolk Hero, Contender, Premier, Victory, Royal Standard, Rosa, Virgin Queen, Ne Plus Ultra, Ruby, Don John, Ion, Duke of Sussex, Sir F. Burdett, Unique, Lady Dartmouth, Hope, Lewisham Rival, Rienzi, Amato, Mount Pleasant, Rival; 6. Mr. Bates, Oxford, Knight's Victory, Virgin Queen, Souter Johnny, Masterpiece, Cambridge Hero, Topaz, Hope, Marquis of Lothian, Horwood's Defiance, Evans's Wallace, Eva, Rienzi, Ruby Superb, Conductor, Frances, Springfield Rival, Unique, Ringleader, Pre-eminent, Dodd's Mary, Suffolk Hero, Duchess of Richmond, Magician, and Egyptian King.

Nurserymen, 12 Blooms—1. Messrs. Brown, Slough, Julia, Annot Lyle, Eva, Amato, Contender, Lewisham Rival, Ruby, Climax, Grace Darling, Unique, Springfield Rival, Hope; 2. Messrs. Mountjoy and Son, Ealing, Rival Granta, Royal Standard, Ovid, Amato, Rosa, Dodd's Mary, Lady Kinnaird, Springfield Rival, Beauty of Wandsworth, Rienzi, Unique, Egyptian King; 3. Mr. Willmer, Sunbury, Frances, Egyptian King, Dodd's Mary, Sir R. Lopez, Hero of Nottingham, Sir F. Burdett, Eva, Don John, Hope, Conductor, Duchess of Portland, Unique; 4. Mr. Shepherd, Bedford, Royal Standard, Dodd's Mary, Victory, Lady Dartmouth, Middlesex Rival, Eva, Rival Queen Superb, Hope, Conductor, Climax, Gaines's Queen Victoria, Napoleon; 5. Mr. Bates, Oxford, Unique, Suffolk Hero, Mary of Burgundy, Hope, Eva, Vanguard, Topaz, Cupped Crimson, Rienzi, Yorkshire Hero, Springfield Rival; 6. Mr. Earl, Bristol-road, Birmingham, Duchess of Portland, Horwood's Defiance, Ovid, Topaz, Don John, Conductor, Lewisham Rival, Egyptian King, Perolla, Rienzi, Eva, and Ringleader.

Amongst the Seedlings there was one which attracted the attention of the growers as having the requisites, of a most superior flower, but, on inspection by the judges, it was found to be gummed in the eye, which, had it not been detected, would have deceived the public, and therefore it becomes the duty of the committee to expose the fact. An exhibitor was also seen on the evening of the Wednesday, whilst the committee and greater part of the exhibitors were at dinner, to select some of the best flowers, from different stands and carry them away, and as the flowers exhibited are considered the property of the committee, a resolution has been passed by the committee that neither of the aforesaid persons be allowed to exhibit at their future shows.

WARWICKSHIRE FLORAL AND HORTICULTURAL SOCIETY'S EXHIBITION.—The third exhibition of the Warwickshire Floral and Horticultural Society took place, at the Town Hall. The attendance on the occasion was numerous and highly respectable, and it must be a source of great satisfaction to the Society to find that their exertions to afford the admirers of flowers an opportunity of viewing some of the choicest floral productions, are fully appreciated. The exhibition is considered to have surpassed any of those of this Society on former occasions; and we believe that so fine a display of roses was never before seen in this town.

The following is a list of the prizes awarded on the occasion.

Roses—Premier prize, Great Royal, J. Pope, and Sons.

Purple, Scarlet, and Crimson—1. *Grandiflora*, Mr. Tew, gardener to Edmund Peel, Esq.; 2. *Ranunculaflora*, Mr. Beach; 3. *Boquet Royal*, J. Gough, Esq.; 4. *Violet Blue*, J. Pope and Sons; 5. *Cormin Feu*, Mr. Tew; 6. *Bonnie Genevieve*, Mr. Coudrey.

Blush, Pink, and Lilac—1. *Duke of Devonshire*, J. Pope and Sons; 2. *La Tourterelle*, E. Hill; 3. *Belle Helena*, Mr. Moore; 4. *Ruga*, Mr. Phillips; 5. *Cabbage Provence*, J. Gough, Esq.; 6. *Blush Provence*, Mr. Coudrey.

White, Cream, and Yellow—1. *White Hip*, Mr. Dickenson; 2. *White Blush*, Mr. Coudrey; 3. *Madame Hardy*, Mr. Tew; 4. *Unique*, H. Pope; 5. *White Damask*, J. Gough, Esq.; 6. *Camellia Blanche*, Mr. Tew.

Shaded, Mottled, Striped, or Edged—1. *Royal Crimson*, Mr. Dickenson; 2. *Ornament du Parade*, Mr. Moore; 3. *One Hundred Leaved Rose*, ditto; 4. *Le Triomphe*, Mr. Dickenson; 5. *Rosa Mundi*, Mr. Moore; 6. *Royal June*, Mr. Beach.

Moss—1. *Crimson*, Mr. Moore; 2. *Provence*, Mr. Phillips; 3. *Blush*, J. Gough, Esq.; 4. *Crested*, Mr. Phillips.

Cluster—1. *De Meaux*, Mr. Moore; 2. *Duke of Tuscany*, ditto; 3. *Purple Grevillea*, Mr. E. Hill; 4. *Grevillea*, Mr. Phillips.

Roses, in pots—1. *Seven Sisters*, Mr. Moore; 2. *Provence*, Mr. Coudrey; 3. *Sebastian*, ditto; 4. *Tourterelle*, Mr. Dickenson; 5. *Unique*, Mr. Moore; 6. *Moss de Meaux*, Mr. Phillips.

Pinks—Premier prize, *Duke of St. Alban's*, Mr. Coudrey.

Purple Laced—*Duke of St. Alban's*, Mr. Coudrey; 2. *Sir J. Banks*, Mr. Walthew; 3. *Omnibus*, Mr. Coudrey; 4. *Lord Codrington*, Mr. T. Barker; 5. *Brilliant*, Mr. Coudrey; 6. *Prudence*, Mr. E. Hill.

Red Laced—1. *Bossum's Elizabeth*, Mr. Coudrey; 2. *Seedling*, Mr. W. T. Barker; 3. *Admiral Codrington*, Mr. Coudrey; 4. *Lord Althorp*, Mr. W. T. Barker; 5. *Criterion*, Mr. E. Hill; 6. *Burton's George the Fourth*, Mr. W. T. Barker.

Plain—1. *Seedling*, Mr. Brittain; 2. *Seedling*, Mr. W. T. Barker; 3. *Seedling*, Mr. Brittain; 4. *Union*, Mr. E. Hill.

Ranunculuses—Premier prize, *Lucas's Stripe*, Mr. Phillips.

Purple, Crimson, and Scarlet—1. *Premier*, J. Pope and Sons; 2. *Emilius*, Mr. Phillips; 3. *Naxara*, ditto.

White Ground, Spotted and Edged—1. *Thomson's King*, Mr. Phillips; 2. *Seedling*, ditto; 3. *Ditto*, ditto; 4. *Carlo Dolci*, J. Pope and Sons.

Yellow Ground, Striped, Spotted, and Edged—1. *Orange Boven*, J. Pope and Sons; 2. *Seedling*, Mr. White; 3. *Seedling*, Mr. R. C. Brown; 4. *Quaker*, J. Gough, Esq.

Stove Plants—1. *Clerodendrum speciosum*, Mr. Dickenson; 2. *Bignonia grandiflora*, ditto; 3. *Pancratium speciosum nova*, D. Houghton, Esq.; 4. *Hæmanthus puniceus*, ditto; 5. *Calathea Zebrina*, ditto; 6. *Ruellia juncea*, Mr. Dickenson.

Greenhouse Plants—1. *Pimelia decussata*, J. Gough, Esq.; 2. *Nerium splendens*, Mr. R. Tongue; 3. *Anigozanthus coccinea*, J. Pope, and Sons; 4. *Siphocampylus bicolor*, Mr. J. Moore; 5. *Swansonia galegifolia*, J. Gough, Esq.; 6. *Dipsacus puniceus*, Mr. J. Moore; 7. *Boronia serrulata*, Mr. Dickenson; 8. *Erodium incarnatum*, Mr. J. Moore; 9. *Cactus Jenkinsonia*, Mr. Jagger; 10. *Nierembergia filicaulia*, Mr. J. Moore.

Orchidæ—1. *Cattleya intermedia*, J. Pope and Sons; 2. *Epidendrum fragrans*, D. Houghton, Esq.; 3. *Oncidium papilo*, J. Pope and Sons; 4. *Bletia tuberosa*, Mr. J. Moore.

Ericas—1. *Gemifera*, Mr. W. T. Barker; 2. *Ventricosa superba*, Mr. White; 3. *Osbornii*, Mr. Dickenson; 4. *Odora rosea*, ditto; 5. *Vestita*, fulgida, Mr. H. Pope.

Calceolarian—1. *Arborea maculata*, Mr. Jagger; 2. *Fine Lake*, Mr. Moore; 3. *Mirabilis punctata*, Mr. Phillips; 4. *Fulgida*, Mr. J. Moore; 5. *Guttata*, J. Gough, Esq.; 6. *Virgin Queen*, Mr. Jagger.

Geraniums—1. Jewess, Mr. Dickenson ; 2. Prima Donna, ditto ; 3. Fosteri rosea, ditto ; 4. Foster's Alicia, Mr. Moore ; 5. Chef-d'œuvre, Mr. Dickenson ; 6. Garth's Perfection, ditto ; 7. Oliver Twist, ditto ; 8. Invincible, ditto ; 9. Miller's Adonis, Mr. Moore ; 10. Alexandrina, Mr. White.

Herbaceous Plants—1. *Alstroëmaria aurea*, J). Houghton, Esq. ; 2 *Spiræa arancus*, Mr. Moore ; 3. *Delphinium Barlowii*, Mr. Dickenson ; 4. Mule Pink, Mr. White ; 5. *Plomis Semia*, Mr. J. Moore ; 6. *Iris Clarimond* Mr. Dickenson.

Frame Plants—1. *Lillium eximium*, Mr. Phillips ; 2. *Campanula muralis*, Mr J. Moore ; 3. *Verbena Niveuii*, Mr. Jagger ; 4. *Lychnis fulgens*, Mr. Moore ; 5. *Campanula garganica*, Mr. Gough ; 6. *Verbena Tweediana*, Mr. Dickenson.

Tender Annuals—1. *Thunbergia Alata*, Mr. Baylis ; 2. *Rhodanthe Manglesii*, J. Gough, Esq. ; 3. *Martynia propisidea*, Mr. Izens ; 4. *Clintonia pulchella*, Mr. H. Pope.

Hardy Annuals—1. *Collinsia bicolor*, Mr. Coudrey ; 2. *Cladanthus arabicus*, ditto ; 3. *Schizanthus Priestii*, ditto ; 4. *Iberis umbellata* ditto.

Pansies in Pots—1. Fair Maid of Perth, Mr. Earl ; 2. Raphael, ditto ; 3. Edgbaston Hero, Mr. Coudrey ; 4. Royal Purple, ditto ; 5. Lilac Perfection, ditto ; 6. Helena, ditto.

Panzies (collections), 24 Blooms—1. Mr. Earl, Diomede, Cupid, Widnall's Belzoni, Widnall's Eliza, Chimpanzee, Lilac Perfection, Earl's Beauty of Edgbaston, Lady Ann, *Purpurea grandiflora*, Earl's *Cerulea grandiflora*, Lord Napier, Lord Warwick, Widnall's Don John, Venus, Apollo, Raphael, Earl's Laura, and seven Seedlings ; 2. Mr. Coudrey, Edgbaston Hero, Beauty of Edmonton, Clara, Thompson's Victoria, Lady Sondes, Juliet, Royal Purple, King of Pansies, Masterpiece, Hamlet, Duchess of Kent, *Crocea superba*, Admiral Codrington, Dauphin, Lord Calthorpe, Lilac Perfection, Lady Peel, Thompson's Venosa, Rainbow, *Lutea purpurea*, Pluto, Corinne, Premier, and Queen of Heartsease ; 3. Messrs. Pope and Sons, Seedling, Tamworth Hero, Camilla, Goliah, *Purpurea grandiflora*, Sultan, Maria, Beauty of Ealing, *Sulphurea elegans*, Maria (new), Rainbow, Seedling, Victoria, Masterpiece, Seedling, Climax, Vesta, Carlo Dolci, Silenus, Miss Malcolm, Betsy, Belzoni, Diomede, and Othello ; 4. Mr. Walthew.

Ditto. 12 Blooms—1. Mr. Earl, Chimpanzee, Lilac Perfection, Apollo, Raphael, Earl's *Cerulea grandiflora*, Thompson's King, Fair Maid of Perth, *Purpurea grandiflora*, and four Seedlings ; 2. Mr. Coudrey, Hero of Edgbaston, Masterpiece, Daphne, Lord Calthorpe, Thompson's Victoria, Clara, Venosa, Lady Sondes, King of Pansies, Pluto, Beauty of Edmonton, and Corinne ; 3. Mr. Walthew ; 4. Mr. E. Hill, Seedling, Warwickshire Lad, Widnall's Amato, Widnall's Eliza, Dauphin, *Purpurea grandiflora*, Lilac Perfection, Cupid, Widnall's Victoria, Zoe, Duchess of Buccleugh, Queen Adelaide, Widnall's Guido ; 5. J. Pope and Son's, Seedling, Tamworth Hero, Camilla, Goliah, Beauty of Ealing, Maria, Climax, *Purpurea grandiflora*, Masterpiece, Belzoni, Dorothea and Alpha.

Ditto, 6 Blooms—1. Mr. Earl, Earl's Beauty of Edgbaston, Lord Napier, Antionette, *Purpurea grandiflora*, Bellona, and Seedling ; 2. Mr. Coudrey, Page's Eclipse, Edgbaston Hero, Lady Sondes, Lord Calthorpe, King of Pansies, and Beauty of Edmonton ; 3. Mr. E. Hill, Daphne, Widnall's Amato, Widnall's Eliza, Widnall's Victoria, Cupid, and *Purpurea grandiflora* ; 4. Messrs. Pope and Son's, Sutton, Tamworth Hero, Seneca, Camilla, Hero of Surrey, and Apollo ; 5. Mr. Phillips, Lord Warwick, Raphael, Lady Anne, *Rotundifolia*, Phœbus, and Fair Maid of Perth.

Cut Specimens—1. J. Gough, Esq. ; 2. Mr. Dickenson ; 3. Mr. White ; 4. J. Gough, Esq. ; 5. Mr. Coudrey ; 6. Mr. Dickenson.

Nosegay, or Groups of Flowers—1 and 2. Mr. Coudrey.

Plants not in Bloom, but remarkable for fineness of growth, &c.—1. *Cycas revoluta*, J. Pope and Sons ; 2. *Charlwoodia Australia*, ditto ; 3. *Aloe Africanus*, Ditto.

Unclassed Specimens.—1. *Cytisus nigricans*, Mr. Dickenson; 2. *Azalea* (early red), Ditto; 3. *Rhododendron hirsutum*, Ditto; 4. *Buddlea globosa*, J. Pope and Sons.

ON AN AMERICAN ALOE, &c.—If you think this worth putting into your pleasing publication, I beg you will; Mr. Bamford Hesketh, of Gwrych Castle, eighteen years ago, pulled down an old hot-house, in which there was an American Aloe, (then about sixty years old,) not considering it any ornament in the new house, it was laid against a south wall in the garden in its old decayed box, where it has remained ever since without ever having been matted or covered; last winter, 1838, it was a little pinched, but it quite recovered its appearance in the summer, and is now as healthy and vigorous as it ever was.

Can the following be accounted for? I sowed sixpennyworth of Hollyhock seed, and transplanted them, they all turned out yellow and double. An answer is solicited from some reader of the Cabinet.

Abergele, August 19th, 1839.

J. B. H.

NEW PLANTS.

Angræcum armeniacum.—Orchidaceæ.—A native of Seirre Lgone, bloomed at Messrs. Loddiges; the flowers are of an uniform apricot colour, produced closely, arranged on a horizontal lateral spike. (Bot. Reg.)

Malachenia clavata.—Orchidaceæ.—From Rio; it has bloomed with R. Bateman, Esq.; the flowers are of a dull green, spotted with purple. The scape rises about nine inches. (Bot. Reg.)

Senecio odoratus.—Why called "Sweet scented?" for it is scentless. The leaves are like an evergreen shrub; the plant rises to two feet high; the flower heads are yellow, small, rayless, and arranged in corymbose panicles. It is a native of New Holland. (Bot. Reg.)

Eurybia glutinosa.—From Van Dieman's Land; it is an erect growing shrub, much the appearance of the Rosemary; the flowers are produced in corymbose heads, the starry ray of each blossom is of a clear pale violet colour. It is a good additional conservatory plant.

Portulacea grandiflora; *rutila*.—A beautiful variety of this pretty flowering greenhouse perennial plant; the flowers are of the richest crimson, more bright than *P. Gillesii*, and about as large as half-a-crown when full blown.

Stenochilus longifolia.—From New Holland; it forms a small bush; each flower is about an inch long, of a dullish green-red colour.

Stenochilus incanus.—From New Holland; it forms a grey bush, looking like an olive, or some leafless acacia; the flowers are solitary, a little more than an inch long, of a dull green colour.

Asteracantha longifolia.—A handsome flowering greenhouse herbaceous perennial plant; it forms a bright rich green bushy plant, bearing numerous whorls of gay blue labiate flowers.

Cytisus Weldenii.—The flowers are produced in erect racemes; they are of so deleterious a quality that the scent will produce headache.

Nepeta salviæfolia.—An Himalayan perennial plant, producing its flowers in long stalked cymes, they are white, and of little beauty.

Ipomea longifolia.—Stems erect, not twining, the flowers grow singly in the axils of the leaves; they are white with a delicate noyca scent, and as large as one of *Calonyction bona nox*. The plant is a perennial, with fleshy tuber like root, and if treated as is done with the dahlia root, will bloom freely in the open border.

Solanum candidum.—A noble looking shrubby plant, with leaves a foot long and nine inches broad, producing clusters of large and handsome white flowers. It has bloomed in the collection of George Barker, Esq., by whom it had been received from Mexico.

Nuttallia Malvaeflora.—The flowers are of a pale pink colour; The plant grows about half a yard high, and deserves a place in every flower garden; it has bloomed in the Epsom Nursery.



Desmodium illinoense



REFERENCE TO PLATE FOR OCTOBER.

ROELLA ELEGANS.—The plant grows about nine inches high, bushy, and blooms very profusely; the beautiful and numerous flowers produce a very fine effect, no collection of stove plants, or in a warm greenhouse, ought to be without it; it blooms for nine months in the year.

Our figure represents only a single branch, but the plant seldom exceeds nine or ten inches in height, and forms a peculiarly neat and symmetrical object. Although its habit appears to be herbaceous, we have never observed it destitute of stems or leaves, so that these are evidently produced in constant succession. It is probable that the plant is suffruticose; but neither its superficial aspect nor a close examination warrant us in making such an assertion.

As its general mode of growth seems to be different from most other herbaceous stove plants, some variation from the usual course of treatment is necessary in its cultivation. With regard to soil, it prefers a sandy loam, with a very trifling addition of heath-mould. The smallest pot into which the roots can be inserted, without undue compression, will be the most suitable, as too much pot-room is decidedly prejudicial. As with other stove plants, a period of dormancy is beneficial; still it must be supplied with water during the entire season, and will not be injured by being continually subjected to a moderately high temperature. Indeed, if kept in a hothouse, it will flower during the whole of the winter months. Especial care should be taken to place it in a position alike free from the shade of other plants and the droppings from them or from the roof of the house, caused by the condensation of vapour, or admitted from the exterior surface. It should be kept on a dry stage or shelf; but a slightly humid atmosphere will be rather propitious than otherwise.

Seeds are liberally matured, and germinate successfully if sown in very light soil in shallow pans, and these plunged in a moderate bottom heat. Cuttings also succeed very well under the ordinary treatment, with all due precaution in preserving them from superabundant moisture.

FUCHSIA WORMALDII.—A very pleasing plant of this celebrated family; we have never seen it bloom in the open bed, there it grows too much into foliage, but in a pot, rather confined, it blooms freely, if kept in an airy part of a greenhouse.

SALVIA CONFERTIFLORA.—A native of Brazil. The flowers are of the woolly section, and are produced in a pendant raceme, and though small, being bright, are pretty. The plant grows several feet high, having large woolly leaves eight inches long, and five or six broad. The plant will flourish either in the greenhouse, or open border in summer, but blooms best in the former, being of a very vigorous habit; in the open border it produces too much foliage.

LOBELIA RAMOSA.—A very highly ornamental plant for the greenhouse or open border in summer; it grows to four or five feet high, produces very numerous spreading branches, which flower profusely. It deserves a place in every collection, it grows rapidly and is easily propagated.

REFERENCE TO PLATE.

HIBISCUS VIOLACEA.—Another of the fine introductions into this country from the Swan River, by Captain Mangles, R. N. We recently saw it in fine bloom at Mr Henderson's Nursery, Edgware Road, London; it was grown in a cool place in their plant stove, it appears that it would flourish and bloom well in a greenhouse, and would be one of the most interesting plants for culture there; the plant is very neat in its growth even without flowers.

SIPHOCAMPYLUS SPICATA.—This species is much neater in growth than the *S. bicolor*, it blooms much more abundantly, and its bright yellow flowers are very showy. The plant deserves a place in every greenhouse; it will, as well as the other species named, thrive in the open air, trained against a trellis or south aspect wall, and are well worth cultivating.

PENTSTEMON GENTIANOIDES var COCCINEUS.—This splendid kind has been raised by Mr. Lowe, of the Clapton Nursery, from Mexican seeds, and of whom we procured plants, being so superior a variety. The plant is as hardy as *P. gentianoides*, and blooms as profusely; it deserves a place in every flower garden.

FLORICULTURAL CALENDAR FOR NOVEMBER.

All greenhouse plants should now be housed without delay, and air admitted, except when it is frosty. The plants should not be watered in the evening, but in the early part of the day, so that the damps may be dried up before the house is closed, as they are during the night prejudicial to the plants. The soil in the pots should frequently be loosened at the surface, to prevent its forming a mossy or very compact state.

The plants of the Cactus that have been kept in the open air during the summer, may be brought to bloom successively, by taking such as are desired to bloom immediately into the heat of a forcing pine house. Other plants to bloom afterwards, should be kept in a greenhouse protected from the frost.

The plants of the *Calceolaria* that have been grown in the open borders during the summer months, should now be taken up and potted, afterwards kept in a cool frame, or cool part of the greenhouse, being careful not to give too much water, just sufficient to keep the soil moist will only be necessary.

The Chinese Primroses that have been grown in the open borders, will require to be taken up.

The plants of some of the *Chrysanthemums* that are grown in pots, and taken into the greenhouse, will be found to have pushed a number of suckers. If the offsets are wanted for the increase of the kind, it is advisable to pinch off the tops, so as to prevent their exhausting of the plant to the weakening of the flower. If the offsets are not wanted, it is best to pull up the suckers entire. Attention will be required to watering, as the roots absorb much if given. If the plant is allowed to wither, it checks the flowers, whether in bud or expanded. And so much do we admire this handsome genus of flowers, that we are fully persuaded their beautiful blossoms, exhibited in form and colour, will most amply repay for any labour that may be bestowed on the plants.

The *Dahlia* seed, if not cut off by frost, will now be perfected. They are best retained in the heads as grown, spread singly, where they will not be liable to mould, and kept in a dry, but not too hot a situation; being thus kept in the chaff, the small seeds will not shrivel, but be kept plump. The roots will now require taking up, if not done last month.

Dutch roots may in this month be successively planted, (see Articles on in former numbers.

Fuchsias and greenhouse plants intended to be inured to the open air, will require to have protection at the roots, &c.

Tubers of *Commelinas*, and bulbs of *Tigridias*, should be taken up and preserved dry through winter.

Newly planted shrubs in exposed situations should be secured to stakes,

Herbaceous border plants may still be divided and replanted.

In taking and potting greenhouse plants &c. that have been grown in the open ground during summer, do not head them down entire as it would cause a production of fresh shoots, which being weak, from the season of the year, often perish during Winter, it is best to head them only partially.

Plants of *Rhododendrons*, Persian lilacs, *Azaleas*, *Roses*, &c. intended to force into bloom by Christmas, should immediately be taken in for the purpose.

Neapolitan Violets should be placed in a cool frame to get into bloom early. As should be done too with pinks, &c.

THE FLORICULTURAL CABINET,

DECEMBER 1st, 1839.

PART I. ORIGINAL COMMUNICATIONS.

ARTICLE I.

ON TAKING IMPRESSIONS OF FLOWERS, &c., BY THE PHOTOGENIC PROCESS.

BY FLORA.

THIS new mode of taking drawings of flowers having created considerable excitement in the floral community. I forward the particulars of it (as given in the Magazine of Natural History), for insertion in the Floricultural Cabinet. I have tried it and find it give a very correct representation of the specimen.

The operation is a little tedious as to its chemical preparation, but when once practised is done very readily, it is well worth adopting, especially to obtain a correct form of what is desired.

The mode of fixing the images of the camera obscura, and copying engravings, by means of the chemical action of light on paper prepared with a solution of chloride of silver, has attracted so much notice, and produced so much popular excitement, that a few observations on this interesting process will not perhaps be considered out of place in your magazine. I venture to occupy your pages with the less reluctance, because I feel that the application of this heliographic or photogenic art will be of immense service to the botanist, by enabling him to procure beautiful outline drawings of many plants, with a degree of accuracy, which, otherwise, he could not hope to obtain.

That light will act on chloride of silver is by no means a novel discovery, and paper prepared with it was long ago used by Ritter

and Wollaston, in testing the chemical action of the rays of the solar spectrum ; still, in this country it was not, I believe, applied to any purpose likely to be of use to the naturalist and traveller, until brought into notice by the researches of Mr. Talbot. It is not a little amusing to observe how many pretenders to the discovery have started up since the announcement of Mr. Talbot's discovery, and that of M. Daguerre in France. The latter gentleman has, through M. Arago, at a late meeting of the French Institute, announced his mode of preparing a sensitive paper, far exceeding that of Mr. Talbot in delicacy, but otherwise possessing the same property of indicating intensity of light by depth of colour, and consequently differing from that marvellous preparation which he is said to possess, and which represents shadows by depth of colour, precisely as in nature.

M. Daguerre prepares his heliographic paper by immersing a sheet of thin paper in hydrochloric ether, which has been kept sufficiently long to be acid ; the paper is then carefully and completely dried, as this is stated to be essential to its proper preparation. The paper is next dipped into a solution of nitrate of silver (the degree of concentration of which is not mentioned,) and dried without artificial heat in a room from which every ray of light is carefully excluded. By this process, it acquires a very remarkable facility in being blackened on a very slight exposure to light even when the latter is by no means intense ; indeed by the diffused day-light of early evening in the month of February. This prepared paper rapidly loses its extreme sensitiveness to light, and finally becomes not more readily acted upon by the solar beams than paper dipped in nitrate of silver only. M. Daguerre renders his drawings permanent by dipping them in water, so as to dissolve all the undecomposed salt of silver.

This process is very inconvenient, for many reasons, among which are the difficulty of procuring, as well as the expense of hydrochloric ether ; on this account I prefer Mr. Talbot's process, although it is to be regretted that this gentleman has not stated more explicitly the proportions in which he uses the ingredients employed in the preparation of his sensitive paper. I have performed a set of experiments on this subject, and can recommend the following proportions as the most effective and economical. Two hundred grains of common salt are to be dissolved in a pint of water, and sheets of thin blue wove post paper saturated with the solution, which, for this purpose, should be poured into a dish,

and, the paper being immersed, the application of the solution to every part should be insured by the use of a sponge. The paper is then to be removed, drained of its superfluous moisture, and nearly dried by pressure between folds of linen or bibulous paper.

Two hundred and forty grains of fused nitrate of silver are then to be dissolved in twelve fluid ounces of water, and this solution is to be applied by means of a sponge to one side of each sheet of the previously prepared paper, which side should be marked with a pencil, so that when the paper is fit for use the prepared side may be distinguished. The sheets of paper are then to be hung upon lines in a dark room to dry, and when nearly free from moisture, their marked sides are to be once more sponged over with the solution of silver, and finally dried; they are then to be cut into pieces of convenient size, and preserved from light, or even too much exposure to air, by being wrapped up in several folds of brown paper, and kept in a portfolio.

The proportions above recommended are sufficient for the preparation of a quire of the kind of paper alluded to; if more of the salt of silver were used, the paper would indeed become darker by the action of light, but its expense would be proportionally increased; and when prepared in the manner directed, it assumes by less than a minute's exposure to the rays of the sun, a rich mulberry brown tint, of sufficient intensity to define an outline very beautifully, which indeed is all that is required.

To use this paper, the specimen, of which a drawing is required, is removed from the herbarium, placed on a piece of the paper, and kept *in situ* by a pane of common glass pressed by weights; a piece of plate glass, however, is preferable, as it is sufficiently heavy to press the plant close to the paper. The whole is then placed in the sunshine, and in less than a minute all the uncovered parts of the paper will assume a rich brown tint. The paper should then be removed from the direct influence of the sun, and placed in a book until the drawing be made permanent: the specimen, quite uninjured by the process, may then be replaced in the herbarium, and the drawing of another taken, and so on. So rapidly is this process executed, that twenty-five or thirty drawings may be obtained in an hour, providing we are favoured with a direct sunbeam; if, however, we have only the diffused day-light five or ten minutes, and sometimes even more, are required to produce a drawing with well defined outlines.

If drawings of recent plants be required, specimens of proper size should be cut, and if not too rigid, placed on a piece of paper, and kept in a proper position by means of a pane of glass, as in the case of dried specimens; but if the plant be rigid, the specimens should be placed for twenty-four hours between folds of blotting paper, under a heavy weight, before placing them on the sensitive paper. Having obtained as many drawings as are required, the next thing is to fix them, so that their otherwise evanescent character may not deprive them of their value. For this purpose place them in a dish, and pour cold water over them; allow them to soak for ten minutes, and then transfer them to, or sponge them over with, a solution, made by dissolving an ounce of common salt in half a pint of water, to which half a fluid ounce of the tincture of sesqui-chloride of iron has been added. The drawings thus prepared may be dried by pressure between folds of linen, and exposure to the air; and may then be examined without danger. On looking at them, every one must be struck with the extreme accuracy with which every scale, nay, every projecting hair, is preserved on the paper; the character and habit of the plant is most beautifully delineated, and if the leaves be not too opaque, the venation is most exquisitely represented; this is particularly the case with the more delicate ferns, as *Polypodium Dryopteris*. Among those classes of plants which appear to be more fitted than others for representation by this process, may be ranked the ferns, grasses, and umbeliferous plants; the photogenic drawings of the former are indeed of exquisite beauty.

The fact of the object being white on a brown ground does not affect the utility of this mode of making botanic drawings; indeed I almost fancy that their character is better preserved by this contrast to tint, than by a coloured outline on a white ground. Every one will be fully aware of the value of this process to the botanist, in obtaining drawings of rare plants preserved in the herbaria of others, and which he would otherwise have probably no means of obtaining.

If the drawing of a tree or a large shrub be required, a box blackened inside, having a hole at one end about one and a quarter inch in diameter, must be provided; in this hole should be placed a lens of five or six inches focus; if one of longer focus be used, the dispersion of light becomes too great to insure an accurate representation. When the tree or shrub is well illuminated by the solar beams, the lens should be presented towards it, at a distance

varying of course with the height of the object. A piece of card-board should then be placed in the box, a little beyond the true focus of the lens, and the former until a well-defined bright image of the tree, etc. is formed on the card, of course in an inverted direction. The box is then to be placed on any convenient support in this position, and a piece of the prepared paper fixed on the card, the lid of the box is then to be closed, and the whole left for half an hour, at the end of which time a beautifully accurate outline of the object will be found on the paper, which is then to be rendered permanent in the usual manner. It is obvious that this plan is unavailable on a windy day, on account of the branches of the tree, &c. being continually moving, so that it is of far less use to the botanist than the above described process for obtaining drawings of small specimens.

FLORA.

ARTICLE II.

LONICERA PERICLYMENUM.—HONEYSUCKLE or WOODBINE.

BY CLAUDIA.

It received the generic name of *Lonicera*, as a compliment from Plumier to Adam Lonicer, a physician at Frankfort. We name it Woodbine, because it winds itself as it were in wedlock to every tree and shrub in its neighbourhood, which it graces by its well attired branches in return for the support it borrows; from hence it is styled the Bond of Love.

“The woodbines mix in am’rous play,
And breath their fragrant leaves away.”

In the time of Edward the Third, it appears to have been emblematical of true love, as Chaucer, the father of English poetry, says,

“And tho that were chapélets, on her hede,
Of fresh wodebind, be such as never were
To love untrue, in word, in thought, ne dede;
By ay stedfast; ne for plesance ne fere,
Tho that they shulde hir hertes all to tere,
Woud never flit, but ever were stedfast,
Till that hir lives there asunder brast.”

This climbing plant always turns from east to west, and so firmly does it hold its supporter in embrace, that we often see young

trees and branches indented like a screw by the pressure. As the gentle Desdemona clung to the dark warrior, so have we seen the delicate and supple stalks of the woodbine endeavour to embrace the trunk of the sturdy oak, and in the bold attempt it is often seen thrown off to perish on the ground, unless caught by humbler shrubs, who seem proud to display the flowery festoons which the monarch of our woods had rejected. So have we seen modern Desdemonas turn from support within their reach, aspiring to climb by means too large for their grasp; they have been drawn up, in weak hopes, by a slight hold, which the first winds severed throwing them to the earth, too feeble to catch the most lowly plant.

We love to see shrubs "o'er-canopied with luscious woodbine," but in the oak of the forest its beauties wither in the shade of its too grand supporter.

The name of Honeysuckle, we presume, was given to this plant, from the trick of children, who draw out the trumpet-shaped corollas from the calyx, to suck the honey from the nectary.

This flower is what is termed a tubulose nectary, and the sweet liquid laying at the bottom is secure from the reach of the industrious bee; but the hawk-moth, a species of the sphinx, hovers over these flowers in the evening, and with its long tongue extracts the honey from the very bottom of the flower. Other insects that have not the advantage of so lengthened a tongue, tap the bulbs of the flower, by making a puncture towards the bottom, and then revel in the luxurious sweet.

The nectary of a flower is that part of the blossom which contains a liquid honey, and we are inclined to think that this saccharine juice is distilled from the plant, and conveyed to the nectary for the double purpose of giving nourishment to the parts of fructification and decomposition to the farina.

"These, nature's works, the curious mind employ,
Inspire a soothing melancholy joy."

The woodbine has a light and elegant, but negligent air, better calculated to ornament rural groves than to embellish stately gardens, and a more suitable climber for the rustic porch than the modern portico. Cunningham has given it to the Cottage of Content.

"Green rushes were strowed on her floor,
Her casement sweet woodbines crept wantonly round,
And decked the sod seats at her door."

The perfume of the honeysuckle being of the most agreeable kind, it should be frequently met with in the shrubbery; when planted near the fore-ground it ought to be kept as a shrub, which, as well as giving neatness, ensures a succession of flowers. In the wilderness walks, it should have liberty to climb the trees, and hang its wreaths from branch to branch; and where the ivy gives verdure to the bare trunk, there should the woodbine display its blossoms and shed its odours; as also over the rural arbours of the present day, as it did o'er those of Shakspeare's.

'Beatrice, who e'en now
Is couched in the woodbine coverture.'

MUCH ADO.

The nurserymen of this country now offer us many distinct species of the *Lonicera*, besides many varieties of the common woodbine. The dutch honeysuckle, *Lonicera Belgica*, may be trained with a stem, and formed into a head like a tree; the flowers of this variety are of a reddish colour on their outsides, and yellowish within, of a very delightful odour. There are two varieties of the Dutch honeysuckle, one of which is called the Long blowing, as it blossoms in June, July, and August; the other succeeds it, and is therefore called the Late Red-blowing Honeysuckle, *L. serotina*. Both of these should be planted in considerable quantities. The latter kind has only been introduced about a century; for in 1715 it was esteemed a great curiosity, and is supposed to have been first brought to this country by the Flemish florists, who were then in the habit of coming over annually with plants for sale.

The Virginia trumpet honeysuckle, *Lonicera sempervirens*, was cultivated in this country by John Tradescant, jun. as long back as 1656, and although it is without odour, it is a desirable evergreen climber, the bright scarlet flowers being so ornamental from May to August. There is a new scarlet flowered variety very superior to the old kind which deserves a place in every shrubbery, trellis, or harbour. This kind of honeysuckle requires a south aspect, and a sheltered situation. The branches being weak and rambling, it is generally trained to a wall; but it has a better effect when its branches are interwoven with the cypress, or any other evergreen, which will shelter it, from the north, and support its gay trumpets to advantage.

The common honeysuckles will grow in almost any soil or situation, and there are few inmates of the shrubbery more desirable than these odiferous stragglers, which perfume the air to a great

distance, particularly in the morning and evening. They are easily propagated, either by layers or cuttings; but the latter are preferred. The cuttings should have four joints, three of which should be buried in the earth, and the fourth above the surface, from which the shoots are produced. September is the best month for planting the woodbine cuttings. How greatly would our hedges be improved by a few cuttings being stuck in the ground; how little the trouble, the expence none,—but the delightful air would well repay the labour.

We should have passed over the medicinal qualities of this plant, had we not accidentally opened the work of a student in physic, who flourished in London, in the year 1681; and as we conclude it is but little known to the students of 1839, we extract it for the sole purpose of benefiting the faculty—*by a laugh*.

This learned Æsculapian author says, under the head 'Woodbind,' "It is a plant so common, that every one that hath eyes knows them; and he that hath none cannot read a description if I should write it. Doctor Tradition, that grand introducer of errors that hater of truth, that lover of folly, and that mortal foe to Doctor Reason, hath taught the common people to use the leaves of flowers of this plant in mouth waters; and by long continuance of time hath so grounded it in the brains of the vulgar, that you cannot beat it out with a beetle. All mouth waters ought to be cooling and drying, but honeysuckles are cleansing, consuming, and digesting, and therefore no ways fit for inflammations; thus Doctor Reason. And, if you please, we will leave Doctor Reason awhile, and come to Doctor Experience, a learned gentleman and his brother. Take a leaf and chew it in your mouth, and you will quickly find it likelier to cause a sore mouth, or throat, than to cure it. It is an herb of *Mercury*, and appropriated to the lungs; the celestial *crab* claims dominion over it, neither is it a foe to the *Lion*; if the lungs be afflicted by *Jupiter*, this is your cure."

The leaves of the woodbine are the favourite food of the goat hence the French have named this plant, *Chèvre-feuille* (Goat's-leaf.)

ARTICLE III.

REMARKS ON SUPERB PINKS.

BY MR. BENJAMIN WILLIAMSON, MANOR STREET, CLAPTON.

HAVING frequently seen applications in your Floricultural Cabinet, for a list of the best Florist's flowers, and where they may be purchased; in reply to which, I beg to state, that I am a great admirer of Florist's flowers in general, but a principal object of my attention is turned to that beautiful flower the Pink (which I am proud to see taking so prominent a station in the minds of the Floricultural World,) and which I spare no trouble to obtain, as I generally endeavour to procure every good sort. Having visited many places and having had an opportunity of seeing many growers, I can safely state, that I never met with any to excel what are grown at Woolwich and its Neighbourhood, either as a Collection, or for Blooming: as a proof of which, I beg to refer to the Metropolitan Show on the 26th of June last, when three prizes out of four, were taken by the Woolwich Growers, the first was awarded to Mr. Norman; the second to Mr. Ibbett; and the fourth to Mr. Ward; all of whom reside at Woolwich. Being myself an Amateur Grower, I consequently grow none for sale, and when in want of any Plants, I apply to Mr. Ibbett of Woolwich, who invariably is sure to supply me with the best sorts, and perfectly correct under their proper names, I can therefore without hesitation recommend him. The following are the best sorts in cultivation that I can recommend to notice, and can be obtained of him at the proper season, from the latter end of September till the beginning of November.

Creed's President.
 Deakin's Burdett.
 Knight's Lady Auckland.
 " Emma.
 Bexley Beauty.
 Norman's Queen Victoria.
 " Defiance.
 Knight of Henley.
 Miss Cheese.
 Ward's Queen.
 Weeden's Queen Victoria.
 Young's Joe Miller.
 Clark's Roseana.
 Barrett's Conqueror.

Dry's Earl of Uxbridge.
 Cousin's Victoria.
 Knight's Lord Brougham.
 Bridge's Queen.
 Ibbett's Triumphant.
 Clark's ditto
 Marshall's Defiance.
 Barlow's George IV.
 Mann's Dr. Summers.
 Aker's Lord Brougham.
 Unsworth's Omega.
 Hopkin's One in the ring.
 Earl of Cheltenham.
 Seal's Miss Austin.

Hardstone's Adelaide.

" No. 1.

Wilmore's Queen Victoria.

Eldridge's Superb.

Smith's No. 88.

Any of the above can be obtained from Mr. Ibbett, (Florist,) Mount Pleasant, Woolwich, as also a splendid collection of Carnations, Picotees, Ranunculuses, &c.

Should you think the above worthy your notice in your Cabinet, I shall feel great pleasure at all times in forwarding any useful information.

B. WILLIAMSON.

[We shall feel much obliged by any further communications our respected Correspondent may favor us with.—COND.]

ARTICLE IV.

ON THE CULTURE OF THE CARNATION.

BY DIANTHUS.

I HAVE been a grower of that lovely plant the Carnation (for showing at competition) for upwards of twenty years, during which time, I have had an opportunity of ascertaining what mode of treatment is required to grow it to the best advantage; I therefore offer the following remarks for insertion in the Cabinet, for November or December, as it is the period when the best layers may be obtained, having established themselves after removal from the parent plant.

When the plants are about mid-bloom I perform the layering in the usual manner, and as soon as I discover they are sufficiently rooted, which varies, some kinds being much longer than others, as season and situation too operate to create a difference; I take the layers up carefully and put four plants into each twenty-four sized pot, placing the layers near the side of the pot, but not for the stem to touch it, for I have found many of the tender sorts die from that circumstance.

The compost which I use is light; as soon as potted, they are well watered, and placed in a close frame and shaded: to those who have not the convenience of a frame, a shady sheltered situation should be selected. After having been shaded about ten days, they will bear full exposure to the sun; but to prevent inju-

ry from heavy rains, the glass should be placed over the plants during the night.

On the approach of winter, the pots are plunged in coal ashes, this is, of course, within the frame, and has the effect of preventing the pots from drying, as well as to guard them against severe frosts. They remain in this situation till the following March, and are then more fully exposed to the air, about the first week in April, they are finally removed into the pots in which they are intended to flower, viz. twelve inches deep and ten across, and others, fourteen deep and twelve across. In the former, I only put two plants, and in the latter I put four; I however, very much prefer the former, as the roots run much more freely in pots comparatively small, when they can easily reach the sides. Drainage is an essential consideration in the culture of the Carnation; in order, therefore, that the water may escape from the earth in the pot with great readiness, I use about three inches of broken pots or stones; these are first placed in the bottom of the pot, and to prevent the earth mixing with this drainage, it is covered with an inch of moss. When all are potted, I then remove them to a situation where they are sheltered from the north winds; as the season advances, and the rays of the sun become powerful, I remove the pots where they receive partial shade from the mid-day sun, and in this situation they are allowed to flower. As soon as the flower stalks begin to grow, the stakes are placed in the centre of the pot, and the stems secured by ties of matting, according as at the time the buds begin to be formed, I place some finely broken manure on the surface of the pots, being watered through this, it greatly invigorates the plants and strengthens the bloom. When the buds are nearly ready to expand, I assist them by using a sharp knife, to part the extremities of the calyx, they then burst much more freely. I also find it to be of the utmost consequence to protect the calyx from bursting, by tying a piece of matting neatly round its centre; some flowers will bloom without this precaution, but by far the greater number require it. As soon as the blossoms begin to expand, I shade the flowers with paper covers. Sometimes the flowers are in danger from earwigs, these I prevent from getting to the flower by a small gauze bag being placed under each flower to stop their progress up the stem, which is quite effectual.

For the compost I take equal portions of fresh loam, rotted cow-dung, a year old at least, river sand, and leaf mould; I have it

looked over to see no wire worm is in it, when I apprehend there are small ones which escape notice, I have some fresh lime stones thrown into a tub of water, have it well stirred up, and after confusion has subsided, and the water becomes clear as at first, I pour it in its clear state over the compost, this effects the destruction of any remaining.

DIANTHUS.

ARTICLE V.

ON CHINESE GARDENS.

(Continued from page 232.)

Neither do they employ together the catalpha and the acacia, the yew and the willow, the plane and the sumach, nor any of such heterogenous sorts ; but on the contrary, they assemble in their large woods, the oak, the elm, the beech, the tulip, the sycamore, maple and plane, the Indian chesnut, the tong-shu, and the western walnut, the arbeal, the lime, and all whose luxuriant foliages hide the direction of their branches ; and growing in globular masses, assemble well together ; forming, by the harmonious combination of their tints, one grand group of rich verdure.

In their smaller plantations, they employ trees of a smaller growth, but of the same concordant sorts ; bordering them with Persian lilacs, gelder-roses, seryngas, coronillas or sennas of various sorts, flowering raspberries, yellow jessamine, hypericum or St. John's wort, the spiræa frutex, altheas, roses, and other flowering shrubs peculiar to China ; such as the moli-wha, the quey-wha, the lan-wha, and the wen-quang-shu ; intermixed with flowers, and with the tallow-tree and padus of various species, the tse tang or rose tree, elder, mountain ash, acacia, double blossomed thorn, and many other sorts of flowering trees : and wherever the ground is bare, they cover it with white, blue, purple and variegated periwinkle, the convolvulus minor, dwarf stocks, violets, primroses, and different kinds of creeping flowers ; and with strawberries, tutsen and ivy, which climbs up and covers the stems of the trees.

In their large plantations, the flowers generally grow in the natural ground ; but in flower-gardens, and all other parts that are highly kept, they are in pots, buried in the ground ; which, as fast as the bloom goes off, are removed, and others are brought to

supply their places ; so that there is a constant succession, for almost every month in the year ; and the flowers are never seen, but in the height of their beauty.

Amongst the most interesting parts of the Chinese plantations, are their open groves ; for as they spend much of their time there, care is taken to situate them as pleasantly as possible, and to adorn them with all kinds of natural beauties.

The ground on which they are planted, is commonly uneven, yet not rugged : either on a plain, raised into many gentle swellings ; on the easy declivity of a mountain, commanding rich prospects ; or in vales, surrounded with woods, and watered with springs and rivulets. Those which are in an open exposure, are generally bordered with flowery meadows, extensive corn-fields, or large lakes ; the Chinese Artists observing, that the brilliancy and gaiety of the objects, form a pleasing contrast with the gloom of the grove ; and when they are confined in thickets, or close woods, the plantations are so contrived that, from every approach, some part of the grove is hid ; which opens gradually to the eye of the passenger, satisfies his curiosity by degrees.

Some of these groves are composed of evergreens, chiefly of pyramidal form, thinly planted over the surface, with flowering shrubs scattered amongst them : others consist of lofty spreading trees, whose foliage affords a shady retreat during the heat of the day. The plants are never crowded together ; sufficient room being left between them for sitting or walking upon the grass ; which, by its shady situation, retains a constant verdure ; and, in the spring, is adorned with a great variety of early flowers, such as violets, crocus's, polyanthus' primroses, hyacinths, cowslips, snow-drops, daffodils and daisies. Some trees of the grove are suffered to branch out from the very bottom of the stem upwards ; others, for the sake of variety, have their stems bare ; but far the greater number are surrounded with rose-trees, sweet-briar, honey suckles, scarlet beans, nasturtiums, everlasting and sweet-scented peas, double blossomed briar, and other odoriferous shrubs, which beautify the barren parts of the plant, and perfume the air.

Sometimes too their open groves are composed of lemon, orange, citron pomelmose, and myrtle-trees ; which, as the climate varies, either grow in the earth, or in buried tubs and pots, that are removed to greenhouses during the winter. They also have groves of all sorts of fine formed fruit-trees ; which, when they blossom, or when their fruit is ripe are exceedingly beautiful : and to add to

the luxuriance of these scenes, the Chinese Artists plant vines of different coloured grapes near many of the trees, which climb up their stems, and afterwards hang in festoons from one tree to another.

In all their open groves are kept young broods of pheasants, partridges, pea-fowls, turkies, and all kinds of handsome domestic birds, who flock thither, at certain times of the day to be fed ; they also retain in them, by the same method, squirrels, pe-che-li-cats, small monkeys, cockatoos, parrots, hog deer, spotted capritos, lambs, Guinea pigs, and many other little beautiful birds and animals.

The trees which the Chinese Gardeners use in their open groves, and also for detached trees, or groupes of two, three, or four together, are the mountain-cedar, the spruce, silver, and balm of Gilead firs, the larch, the smooth stemmed pine, the arbor vitæ, and cypress ; the weeping willow, the u-kyew-mu, the birch, the maple, the western walnut, arbutus, tulip acacia, oak, elm, and all others that grow in picturesque forms ; and whenever they lose their natural shape, either by too quick vegetation, or other accidents, they endeavour to reduce them to an agreeable form, by lopping off their exuberances ; or by forcing them into other directions. The Indian, or horse-chestnut, the lime, and some others of a stiff, formal growth, they never use detached ; but find them on account of their rich verdure, their blossom, and abundant foliage, very fit for thickets, woods and avenues.

They have particular plants for the dressed gay parts of the Garden ; others in their wilds and scenes of horror ; and others appropriated to monuments and ruins ; or to accompany buildings of various sorts ; according as their properties fit them for these different purposes.

In planting, they are nicely attentive to the natural size of their plants ; placing such as are of humble growth in the front ; and those that are higher, gradually inwards : that all may be exposed to view at the same time. They appropriate certain plants to low moist situations ; and others to those that are dry and lofty ; strictly attending therein to Nature : for though a willow, say they, may grow upon a mountain, or an oak in a bog, yet are not these by any means natural situations for either.

The lakes and rivers are well stored with fish and water-fowl ; all the vessels are contrived for fishing, hunting, and other sports that are profitable as well as entertaining ; and in their borders

they plant, instead of flowers, sweet herbs, celery, carrots, potatoes, strawberries, scarlet beans, nasturtiums, endive, cucumbers, melons, pineapples, or other handsome fruits and vegetables ; while all the less sightly productions for the kitchen, are carefully hid behind espaliers of fruit-trees. And thus, they say, every farmer may have a Garden without expense : and, that if all landholders were men of taste, the world might be formed into one continued Garden, without difficulty.

Such is the substance of what I have hitherto collected relative to the Gardens of the Chinese. My endeavours, in this Article, have been to give the general outline of their style of Gardening, without entering into trifling particulars, and without enumerating many little rules of which the Artists occasionally avail themselves ; being persuaded that, to men of genius, such minute discriminations are always unnecessary, and often prejudicial, as they burden the memory, and clog the imagination with superfluous restrictions.

The dispositions and different artifices before mentioned, are those which are chiefly practised in China, and such as best characterize their style of Gardening. But the artists of that country are so inventive, and so various in their combinations that no two of their compositions are ever alike : they never copy nor imitate each other ; they do not even repeat their own productions ; saying, that what has once been seen, operates feebly at a second inspection ; and that whatever bears even a distant resemblance to a known object, seldom excites a new idea. The reader is therefore not to imagine that what has been related is all that exists ; on the contrary, a considerable number of other examples might have been produced : but those that have been offered, will probably be sufficient : more especially as most of them are like certain compositions in music, which, though, simple in themselves, suggest, to a fertile imagination, an endless succession of complicated variations.

To the generality of Europeans, many of the foregoing descriptions may seem improbable ; and the execution of what has been described, in some measure impracticable : but those who are better acquainted with the East, know that nothing is too great for Eastern magnificence to attempt ; and there can be few impossibilities, where treasures are inexhaustible, where power is unlimited and where munificence has no bounds.

European artists must not always hope to rival Oriental grandeur : they will seldom find islands for ostriches, or forests for elephants, where property is much divided, where power is confined, and wealth rare : men of genius may often conceive more than it is practicable to execute ; yet let them always boldly look up to the sun, and copy as much of its lustre as they can : circumstances will frequently obstruct them in their course, and they may be prevented from soaring high ; but their attention should constantly be fixed on great objects, and their productions always demonstrate, that they knew the road to perfection, had they been enabled to proceed on the journey.

Where twining serpentine walks, digging holes and crooked ditches for earth to raise mole-hills, scattering shrubs, and ringing never-ceasing changes on lawns, groves and thickets, is called Gardening ; artists will have few opportunities of displaying their talents ; it matters little there who are the Gardeners ; a cabbage planter may rival a Claude, and a clown outwine a Poussin ; the meanest may do the little there is to be done, and the best could reach no farther. But wherever a better style is adopted, and Gardens are to be natural, without resemblance to vulgar Nature, new without affectation, and extraordinary without extravagance ; where the spectator is to be amused, where his attention is constantly to be kept up, his curiosity excited, and his mind agitated by a great variety of opposite passions, there parts will be necessary ; and Gardeners must be men of genius, of experience and judgement ; quick in perception, rich in expedients, fertile in imagination, and thoroughly versed in all the affections of the human mind.

ON CHINESE GARDENS.

ARTICLE VI.

ON THE CULTURE &c. OF THE TULIP.

BY MR. J. FORBES, STANLEY, YORKSHIRE.

As the period is approaching for planting this long admired favorite, the Tulip, I forward for insertion in the Cabinet, some remarks upon its history, descriptive properties, and mode of culture, extracted from the observations of a Continental Grower of celebrity, (M. Trippet,) who forwarded me the same, along

with a fine collection of splendid kinds of Tulips. He observes that the Tulip grows naturally on the Savoy mountains, and in the neighbourhood of Nice. It furnishes varieties of which the two principal are, first, Bizarres, and second, those on a white ground. The first are those which have a yellow tinge, mingled with other colours, but entirely exclude white.

They were in great esteem forty or fifty years back, but are looked on less favourable at present. Many persons, however, cultivate them still, to form a contrast, by their dark shades of colour, with those on a white ground. The last named kinds, on the contrary, have not the slightest trace of yellow. Sometimes, indeed, at the moment of blowing, a few exhibit a pale shade of yellow, but the rays of the sun soon render them of a pure white. These are again sub-divided into two classes: the first into tulips, on a white ground, streaked with red, pink, crimson, &c.; and, secondly, those on a white ground, streaked with violet, amaranth, purple, lilac, &c. The tulips, commonly called Dutch, are the only ones now admitted into a choice collection, and of these there are about 700 good varieties.

In order to be admitted into this privileged class, certain conditions have been laid down by lovers of the flower, which the tulip should fulfil, and to fail in even a single regulation is sufficient to cause it to be rejected. These conditions are, first, regularity of form; secondly, harmony of proportions between the several parts; thirdly, firmness of the stalks and petals; and, fourthly, on each of these a union of at least three colours clearly defined.

With respect to the first condition, it is indispensable that, from the point of junction, the petals should bend themselves gracefully about a third part of their height, and then describe a straight line to the top, so as to form a sort of cup with a circular opening. The summit of the petals must not be in the slightest degree, blunt or jagged at the edge.

Referring to the second condition, the width of the flower ought to be about three-quarters of its height. The nicest harmony of proportions ought to reign, not only in the different parts of the corolla, but also between this latter and the stem. The bulk of this ought to be co-ordinate, both with its own height, and with the colour of the corolla. Thus a flower, with breadth equal to its height, a long stem supporting a diminutive flower, or a fine corolla inserted into a weak, bending, or ridiculously short stem,

are blemishes which the severe taste of good judges proscribe as fatal.

As to the third law, we may remark that strength and straightness of stem are indispensable. Here the petals must be well furnished, for they then resist more easily the power of the solar rays.

To satisfy the fourth condition, it is necessary that at least three colours should appear, harmoniously combined, so that the eye may love to rest on the union. They must be well defined, bright and formed into regular designs—they must continue perfect up to the time of the flower going off, without running into each other from the effects of rain, or becoming weak and dried from the rays of the sun.

Tulips are obtained in two different manners—by seed and offsets. Experience proves that any variety of tulip is not reproduced by seed; and hence amateurs always have recourse to this mode of propagating it, when they desire to obtain new kinds which kinds they denominate *Conquests*. In order to obtain the accomplishment of their wishes with more certainty, they take care not to employ any seed but that which comes from tulips having the bottom of the petals of a pure white, because the colours of tulips proceeding from such seed develope themselves more rapidly than those produced from other seed. Tulip seed ought to be placed in the earth about the month of October, in ground well prepared for its reception. It should be protected from the frost by layers of leaves or mats. When carefully attended to, the plants will appear above ground towards the end of February. From the size of a pea the first year, the root will increase considerably in the two following springs. “At each of these periods, when the young leaves are faded,” I spread over my plants about an inch of earth, such as covered the seed originally, and the bulbs remain untouched. This I allow a second winter, when the bulbs being a good size, I take them up and afterwards treat them as others. When I replant I place them at a depth of three inches, and two or three inches apart. Lastly, each year, I replant them in fresh ground; convinced by experience, that they reach perfection sooner by changing the soil, particularly if it has been well manured and fertilised by having grown other plants. No matter what care may have been devoted to the seed, few perfect flowers are obtained in the first blow, which does not usually take place before the fourth year; in

the following years, gradual amelioration of the colours take place, and those which at first were vague and indeterminate, finish at last, though in no fixed time, by assuming clear and distinct characters, until they reach all the perfection of which they are capable. Every tulip produced by seed, and as yet in a state of immaturity, is called a breeder, and in this state may continue from two to ten years. From the first blowing all flowers whose form is ill made, or whose petals are thin, or whose stem is weak and bending, or is tinged with yellow, are thrown away. When the petals fall, the seed vessels are broken off in order to give more strength to the root. After the fourth year, the roots are treated as those of a collection already formed. The offsets of a tulip always re-produce a plant identical with that from which they proceed. The period of their coming into bloom is from the first to the fourth year. They are planted in September, about three inches apart, in proportion to their size, in ground prepared the month before. A great number would perish from being dried up, if planting them was delayed to November. In taking them up and replanting, the same order is observed as is followed in an established collection. The advantage of offsets is great, as they serve to repair losses which a severe season or accident may cause to the old collection. In a tulip collection, the size of the roots is a matter of importance. It has been remarked that some of them, of a large size, produce petals which are not properly proportioned. Most frequently they become open and loose, whilst when the roots, are of moderate size, the flowers are perfect. Experience, however, is the safest guide in selecting the roots.

It is not sufficient to unite the most beautiful tulips in the same place, as if they are thrown together by chance or without harmony. Not only must the heights agree, but also the colours. Art in this respect comes to the embellishment of Nature. In order to display as much as possible the richness and value of a fine collection, the following precautions ought to be attended to, as they will be found to facilitate the labour in a high degree.

If, for instance, I have 300 tulip roots to plant, whose height and colour I am perfectly acquainted with, I provide six drawers with fifty compartments in each. In these I place the roots, in some position where the air will have a free access. I place the drawers in a case, one over the other, with a space between to let in the air, and the whole is surrounded with a wire grating, to

keep away rats and mice. As I know accurately the classification of my tulips, according to height and colour, yet I place the roots in proper order in the compartments. Its first series hold those whose stem is highest, and which are planted on the top of the bed : the other compartments hold others less high, until all are filled. The colours alternate as symmetrically as possible, so that the same colour never appears twice together, either longitudinally or transversely. It will result from this disposition of the plants, that, in looking at the the bed obliquely, they appear like a draught-board, with lines formed of an uninterrupted colour. When I have properly arranged the roots in these compartments, the next step is to choose out a piece of ground, not moist, open, exposed to the south-east in preference to the south west, and distant at least fifteen feet from any wall, or hedge, I find it best to give the bed a certain inclination, in order first to see the position of the flowers more easily, and next to facilitate the flowing off of rain or other moisture. When I make a second bed, I place it opposite and parallel to the other, with a walk of about four feet between, and with the lower part of one bed next to the lower part of the other. By this means the two beds incline towards each other. In order to renew certainly the principles which are indispensable to bring tulips to perfection, the earth is changed every two years ; and in order to preserve to the plants, the second year, a vegetation as favourable as the first, it is well watered with liquid manure, poured over the ground in July or August ; and in order that every particle of the earth should be impregnated with it, the whole soil is dug up in a month after, and well mingled together. This is far preferable to mixing up dung with the soil as is usually done, I find the flowers are equally fine, and of much clearer and finer colours. When the earth is properly prepared thus, from the 12th to the 20th of November, the planting of the roots takes place. The bed is carefully measured, and the roots placed at equal distances. A small portion of sand placed at the bottom of each hole, and the root covered with a little, allows the moisture to pass through it quickly, and the roots are protected from insects. When the roots are placed thus, they are covered by the hand with a small quantity of earth ; not pressing it too closely, as if done so, the earth is rendered too compact by the pressure, so that the roots do not vegetate easily, and the plant is liable to be injured by moisture, which finds some difficulty in passing through. The edges of my beds are supported, with stone, which keeps out all insects.

Tulips, from being exposed to the intemperature of the atmosphere, are subject to certain diseases, which it is of consequence to prevent. From the middle of February, to the middle of April, they have generally to encounter snow, hail, and cold rains. The cups formed by the young leaves, at the bottom of which the bud lies shut up, get filled with rain, and the result is, that the water remains there until it insinuates itself into the interior of the root, and often spoils it, or impedes its opening. To obviate any inconvenience arising from exposure to the weather, it is necessary to shelter the flowers with a covering of canvass, which, by means of cords and pullies, I can extend or roll up at will. The bed is covered with this in unfavourable weather, but exposed to the rays of the sun, and to gentle rain. When the flowers are open the covering is kept over the bed during rain, and from nine to four o'clock in case of sun, by this means the duration of blowing, is prolonged, and the beauties of the flowers can be admired without any exposure to rain or sun.

When the flowers are open I take a particular survey of my stock to see that each kind is true to the catalogue register, and regulate if required. When the bloom is over, the seed vessels are cut off, in order that the roots may profit by the sap, which otherwise would have been absorbed. The time for taking up the roots is easily ascertained. When the stems roll themselves round the fingers without breaking, then I am certain that the time for taking up has arrived. This takes place generally towards the end of June, and I am careful to observe the same order as was adopted in planting them. Too tender to resist the action of the sun after being taken from the ground, the roots are liable to perish by being exposed to its rays, so that care is taken to avoid such injury.

In taking them up I gently uncover the ground at the sides of the roots, and then uncover them; after they have been deprived of their shoots, of their dry skins, and separated from the offsets, I place them in cases destined to receive them. I then leave them to dry in the shade from morning to evening, for four or five days. During a month, I occasionally expose them to the air, in order to guarantee their perfect dryness, and thus contribute to their better preservation. Some other remarks on Florist's flowers are sent me which I reserve for future occasions.

PART II.

NEW OR RARE PLANTS.

(Noticed since our last.)

BAUHINIA CORYMBOSA. Corymb-flowering Bauhinia (Bot. Reg. 47.

FABACEÆ. TRIANDRIA, MONOGYNIA.

A very pretty climbing shrub, introduced from China some time ago, but we believe all attempts to bloom it had been unsuccessful, until September 1838, when a plant under the treatment of Mr. Wells, of Redleaf, produced an abundance of flowers, which are of a delicate blush color. In the Linnean classification this plant suits, equally well, no fewer than eight classes or orders. It succeeds best when placed in a cool part of the stove, and planted in a fresh and rich soil composed of peat, loam, and decayed manure.

CORYANTHES MACULATA, var. **PARKERI**. Spotted lipped Coryanthes, Mr. Parker's variety. (Bot. Mag. 3747.

ORCHIDACEÆ. GYNANDRIA, MONANDRIA.

Introduced from Demerara, and cultivated by C. S. Parker, Esq.; the raceme produces numerous flowers, each is about three inches across, yellow, with a labellum of a brownish purple, spotted with darker purple spots.

OXALIS BARRELIERI. Barrellier's Shrubby Wood Sorrel. (Bot. Mag. 3748.

OXALIDÆÆ. DECANDRIA PENTAGYNIA.

A bothouse species, growing about a foot high, each branch bearing several flowers of a pretty yellow colour, spotted with brown. Each blossom is about half an inch across.

TOURRETTIA LAPPACEA. Bur-fruited. (Bot. Mag. 3749.

BIGNONIACEÆ. DIDYNAMIA ANGIOSPERMIA.

A native of Peru, introduced in 1837 into the Glasgow Botanic Garden, by J. McLean, Esq., of Lima, where it has bloomed. The plant is annual climbing to five feet high; the flowers are produced in terminal spikes of about ten blossoms on each; the calyx is at first of a bright red, changing to green; the corolla is of a dark purple, slightly streaked. Each flower is about half an inch long.

ODONTOGLOSSUM ROSSI. Mr. Ross's (Bot. Reg. 48.

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

Mr. Ross the collector for G. Barker, Esq., sent this very pretty flowering plant from Mexico; each flower has a bright white lip, lying, as it were, in the centre of a rich green, yellow, and blue star of three points, and produces a beautiful and interesting appearance. Each flower is about two inches across; the flower scape rises to about six or eight inches high.

RHOI'DENDRON CAMPANULATUM. Bell-flowered.

(Bot. Mag. 3759.)

ERICÆÆ. DECANDRIA MONOGYNIA.

This very fine flowering species has rarely bloomed in this country, it has however, flowered with Mr. Dickson, at the Newton Nursery, Chester; Mr. Dickson states, that the plant has been growing in the open ground for seven years, and during the severest winter has been uninjured; that gentleman, having to remove the plant from its situation, placed it in a tub in November 1838, and put it in a greenhouse, where it bloomed the last spring. The plant is near five feet high, and bushy, and when in bloom was a most splendid object; the flowers are of a very delicate rose colour, dotted with a rosy purple, and tinged with yellow in the tubular part. Each blossom is about two inches and a half across, of a bell shaped form, and are produced numerously in fine heads.

CLEMATIS LATHYRIFOLIA. Large flowered erect Clematis.

(Bot. Reg. 61.)

RANUNCULACEÆ. POLYANDRIA POLYGYNIA.

A very showy hardy perennial plant, the stems grow erect to about four feet high, producing a profusion of white blossoms from July to the end of the summer.

DENDROBIUM FORMOSUM. Beautiful Tree-bloom.

(Bot. Reg. 64.)

ORCHIDACEÆ. GYNANDRIA MONANDRIA.

Collected on the Nepal Mountains, by Dr. Wallich, who observes that it grows in large tufts upon trees or rocks; it is a magnificent flowering species. The flowers are produced on racemes, each having from four to seven blossoms; the flower is about three and a half inches across, of a beautiful delicate white, having a large yellow spot on the labellum. It has a very agreeable perfume.

FABIANA IMBRICATA. Imbricated.

(Bot. Reg. 59.)

SOLANACEÆ. PENTANDRIA MONOGYNIA.

This very neat and pretty flowering plant was originally discovered in Chili, it has very much the resemblance of some of the profuse white flowering heaths; the blossoms are produced in spikes of six or more inches long; each flower is near an inch in length, and as a very neat and delicate appearance. The plant is shrubby, having a bright green foliage, rather resembling in form the Tamarisk; the shrub, however, forms a pretty bush, and when grown in the greenhouse, is loaded with blossoms. It thrives well in sandy peat, and may be kept out of doors in summer, as is done by some with Heaths, but requires a little shade from mid-day sun. It has bloomed in the collection of Messrs. Lucombe, Pince, &c., Exeter, and Messrs. Rolli-ssons, Tooting. We have seen it exhibited at the Hort. Societies' Rooms, London.

PATERSONIA SAPPHARINA. Sapphire.

(Bot. Reg. 60.)

PATERSONIA. IRIDÆÆ. MONADELPHIA TRIANDRIA.

A native of the Swan River, and introduced by that indefatigable florist, Captain Mangles. The plant is of the Iris tribe in growth, but the flowers have more the appearance of the Tradescantia; the stems rise to about two feet high, and terminate with a spatha of numerous flowers. Each blossom is about two inches and a half across, of a most beautiful violet blue, shaded with darker. The flowers are of short duration, but are produced in continued succession. A greenhouse or cool frame treatment we judge to be suitable; it is well worth growing.

PART III.

MISCELLANEOUS INTELLIGENCE.

QUERIES.

ON BLOOMING TROPEOLUM TUBEROSUM.—Having been a Subscriber to your Floricultural Cabinet for some time, I take the liberty of stating that I have grown the *Tropæolum tuberosum* for two years, both in the pot, and turned out in the open ground; in the former way I found it did not grow very strong, but in the ground it grew very vigorous, and covered an immense space of the wall against which it was placed, it was twelve feet high, but I cannot get it to flower, it grows on until the frost takes it, and never shews the least inclination to bloom; nor am I singular in this, as several of my friends have tried it with the same result. Now, if you can give me a reason for this, or directions for a more fortunate cultivation of this plant, in your next Number, you will confer a great favor on
W. R.

Liverpool, October 1st, 1839.

P. S.—I raised it first in the hotbed and turned it out in May.

[We never saw it grown and trained against a wall, but it is very probable that the heat of the wall, as well as situation, would encourage the plant to grow too quickly, and run into shoots too weak to bloom, though extending considerably in length. In such a situation a good supply of water would be required, to have vigour to extent of shoots.

When grown in the open border where the plants have the sun most of the day, we have seen the plants bloom freely; they were planted in good rich soil, and had some branching sticks placed around them, so that as they extend, they formed bushes about the size of a moderate sized gooseberry bush. The open situation would prevent the over-rapid growth, and have a tendency to promote blooming; the plants we saw were tolerably good ones when turned out in May.

We hope that any of our Readers who have bloomed the plant successfully when trained, will forward us particulars of situation and mode of treatment.—COND.]

ON BLOOMING TECOMA JASMINOIDES, AND IPOMÆA HEDERACIFOLIA.—I have had a plant of *Tecoma Jasminoides* and another of *Ipomæa hederacifolia* in my possession for about twelve months, and have had them kept in a greenhouse. They have each grown to six feet, and are in excellent health, but have not shown any symptoms of flowering; they were grown in peat, but I have lately transplanted them into a richer soil, with no better effect as to blooming. I should be obliged to any of the Readers of the Cabinet who would furnish me with any information on the culture of the above named plants, so as to succeed in blooming them.
M. L. R. M.

October 5th, 1839.

[*Ipomæa hederacea*, and *Ipomæa hederifolia* are annuals, and usually bloom, whether grown in pots or planted out into the open border. It is probable the *Ipomæa* named, is not correct as to kind; if it be a greenhouse species it will very probably bloom next season, sometimes the removal of a plant from a warm to a cold temperature will prevent its blooming the first

season, or its tuber, (if of that class) may not be large enough to give vigour for blooming the first season. If it be a hothouse species, it will, of course, require such a temperature. The *Tecoma* does not usually bloom till it has got well established. It is highly probable it will bloom next year.—COND.]

ON A SELECT LIST OF TULIPS.—If some of your numerous readers would furnish a list of some really good, but not high priced Tulips, such as come within the reach of Amateurs of moderate means. The colours also, and any observations which would be a guide to the purchase of a small collection, it would I am confident be useful to many of your readers, and more particularly so, to
E. N. N.

[The following is a selection of superior kinds grown in the splendid collection of Messrs. Lockhart's, Seedsmen, Cheapside, at their grounds Fulham.]

TULIPS.—BLYBLOEMS AND ROSES.

	s. d.		s. d.
Ambassadeur de Hollande	7 6	Imperatrice Romaina	2 6
Bienfait Incomparable	5 0	“ de Maroc	5 0
Cerise Prine	2 6	Do little	2 6
Grotuis	5 0	Comte de Vergennes	7 6
La Majestueuse	5 0	Armida	5 0
L'arbre de Diaue	5 0	Abigail	2 6
Roi de Siam	7 6	Belle Jacomine	1 6
Washington	2 6	“ Judaique	1 6
Rose Hébéc	1 6	General Woronzow	2 6
“ Reine des Fleurs	3 6	Maitre partout	2 6
“ Pretiosa	2 6	Bacchus	5 0
“ Miniature	1 6	La Sultane	7 6
“ Vestalis	3 6	Princess d'Austria	2 6

BIZARDS.

Aeolus	3 6	Gargantua	1 6
Aadrubae	2 6	Gordianus	2 6
Charbon Noir	2 6	La Lueur	3 6
Feu de Courtray	2 6	Mallagrida	2 6
Francis des Princes	5 0	Pontifex Maximus	2 6
Gloria Mundi	5 0	Prince de Roebec	2 6
Kirrhua	2 6	Mount Vesuvius	1 6
Goud beurs	1 6	Goudberg	1 6
La Mignonne	1 6	Passe d'Alost	5 0
Le Devil	1 6	Brisson	10 6
Trafalgar	1 6	Albé de St. André	1 6
Surpasse Catafalque	7 6	Electeur de Cologne	1 6
Caravata	3 6	Incomparable Premier	2 6

COND.]

ANSWER.

ON SENDING DAHLIAS TO THE ANTIPODES.—In answer to S., who wishes to know how to send Dahlias to the Antipodes, I beg to say, that in November 1838, I dispatched a collection to Bombay which were remarkably long on the voyage, exceeding four months, and they arrived in very fine preservation. The method is simply packing them in pounded charcoal in a deal box. I hope soon to give you an account of their altered nature; in August I heard they had grown to the height of twenty feet, with a stem the thickness of a man's arm, and covered with bloom; they flowered during the rains. Is it probable they may become perennials? (the Dahlia is—COND.)

Narcissus and other bulbs were dispatched in the same way, and have succeeded equally well. But I should particularly advise S. not to wait till the Spring, but send them when in a state of rest. I sent at the same time a box of plants packed by a Nurseryman in dry moss, which he expected certainly to succeed, but they arrived a mass of rottenness; I should be glad to know from any experienced exporter, if he has succeeded in any way besides that of sending them in those small greenhouses now used by Messrs Loddiges, &c. J. G.

REMARKS.

ON THE TRANSMISSION OF SEEDS FROM REMOTE COUNTRIES. &c.—London Horticultural Meeting, September 18. 1838. Extracts were read from a letter, addressed to the Vice Secretary, by Dr. Hugh Falconer, Superintendent of the Botanical Garden of Saharunpur, and dated Cashmeer, January 24. 1838.

" I have been gratified to find that the Himalayan seeds, sent by me, succeeded so well with the Horticultural Society.

" As the result seems to have interested you, I may mention the mode in which the collection and package were managed. The seeds are collected generally on a march along an extensive tract of country; as a general rule, the pericarps are not detached, but the fruit and seed immediately packed up in paper; the closed paper packets, especially those containing baccate or juicy fruits, are daily exposed freely to the sun! and, to increase the heating effect of the solar rays, the packets are spread out on a black blanket, and kept so till the paper of the packets feels dry, a man being employed in turning them occasionally: the paper inhibes moisture during the night, and the process is repeated till all moisture is thoroughly dissipated. In the rains, which embrace about half the seed season in the Himalayas, the sun is not available, and the packets are daily dried before a gentle fire, till the same effect is produced; but the result is much more uncertain as regards subsequent germination. In packing up the packages for transmission to Europe, the little packets are folded up loosely in a couple of envelopes of paper; and an invariable caution is given along with them, never to let the packages get into a box or trunk, much less into the ship's hold; but to suspend them loosely from an airy corner of the cabin, free from the risk of moisture and spray.

" On a march, where you move daily under canvass from place to place, the amount or duration of shade required for drying seeds, or their fleshy coverings, is not unavailable, or I should certainly never torrefy the packets in the sun; all that can be said of the method is, that it speedily dries the seeds without killing them. The management on board ship appears to me to be every thing; loose wrappers, free exposure to the air in shade, and exemption from boxes, trunks, or the hold.

" The exposure to the sun, with the augmented heating effect produced by radiation on a black blanket, is perhaps interesting with reference to the conditions mentioned by you at p. 304. of your *Introduction to Botany*, 2d edition; but the effect is probably merely a heating one, as the opacity of the paper, and the reflecting purity of the light colour, must prevent the luminous rays being transmitted to the seeds. I should certainly expect a different result in the end, with reference to germination, if the seeds were directly exposed.

" On one occasion, I received from England a large investment of garden vegetable seeds from a London seedsman. They were packed in the thick dark brown paper which is generally used by grocers and seedsmen, and which, for the facility of folding, is usually in a somewhat damp state. The packages were nailed up in a large wooden box, with numerous folds of this paper, and the box then hermetically sealed in a tin case; it then found its way into the ship's hold. The damp paper, which, in the temperature of

England, say at 50°, would have mattered little, became an important agent when the ship got into the tropics; at about 80° the damp became a hot vapour, and, when the seeds reached me, I found them all in a semipulpy and mildewed state, in fact parboiled by the steam process; and, out of a 39l. investment, not a seed germinated.

"I shall soon have the pleasure of sending you another collection, made on the hills to the westward, and in Cashmeer, where I now am.

"I have found the *Prangos pabularia* growing in the valley."

With reference to this communication, it was stated that by far the greater part of the seeds alluded to by Dr. Falconer were in a fresh state when they reached the Society, and presented a remarkable contrast with those which usually arrive from Calcutta and elsewhere. There can be no doubt, that the most important precaution to observe, in conveying seeds safely through a long voyage, consists in exposing them freely to the air; because, if that is attended to, the damp, which, when in combination with a high temperature, contributes so much towards destroying the germinating power of seeds, is dissipated as fast as it is formed. It was added, that, in the experience of the Vice-Secretary, no better plan was known for sending to great distances most kinds of seeds, than, after being well dried, packing them loosely in common brown paper, and enclosing them, without pressure, in small coarse canvass bags, suspended from the sides of the cabin, where they could be kept dry. The society has tried various other methods, such as packing in sugar, and in charcoal: enclosing in tin cases, in bottles sealed up, &c.; and all such plans invariably proved unfit for the preservation of the germinating principle of seeds; especially the two last, which had long been known to be a means of destroying, rather than preserving, life, although still persevered in.

It was added, in illustration of these observations, that the most successful instance of introducing seeds of the deodar cedar, from India, occurred some years since; when a plan, similar to that now recommended for adoption, was adhered to. In the year 1831, the Honourable T. Leslie Melville, on his return to England, brought with him some cones of the deodar, thrown loosely into a drawer in his cabin; these were presented to the Society, by that gentleman, and were so fresh, that nearly the whole of them germinated immediately upon being sown; and, in fact, furnished the principal part of the plants which the Society has been for some years distributing of this most valuable tree.

ON A NEW METHOD OF WRITING ON ZINC, FOR LABELLING PLANTS.—Mr. Henry Braconnot, the celebrated French Chemist of Nancy, to whom we are indebted for the curious transformation of rags and other similar vegetable substances into starch, gum, and sugar, by the agency of oil of Vitriol, and whose name is well known in the chemical world for various researches connected with the analysis of vegetable substances, has given in the last number of the *Annales de Chimie et de Physique*, a preparation for writing on plates of zinc to label plants. The writer having a dislike to painting in oil which is often inconvenient, and never endures a long time, resolved to turn his attention to some other way which would prove both ready and durable. The system of writing on zinc with a black crayon, which was accidentally discovered by M. Symon an Amateur at Brussels, and noticed in the *Revue Horticole* for October 1832 and the *Bon Jardinier*, for 1832, possessing many imperfections, Mr. Braconnot to try some experiments, being anxious to obtain a liquid, or a species of ink, which would be perfectly durable when exposed to the changeableness of the weather, and also one with which, he could write with ease. This end, after several proofs, he is induced to believe he has in a great measure attained. If it answers he will have done both the botanists and amateurs a real service. The preparation is as follows:—

Take Verdigris in powder one part,
Salamoniac in powder one part,

Lamp black (Mori de Fumea) half a part,
Water ten parts ;

Mix these in a glass or pot Mortar, at first only adding as much water as will mix it well, then add the remainder of the water, when placed in a vessel, let it be well shaken up from time to time and in a few days it will be ready for use. This is not only excellent for labelling plants, but also for marking objects it is wished to preserve in low, wet, situations, and for marking key, becoming quickly dry and being very durable.

FLORAL EXHIBITIONS.

We have had numerous accounts of the Floral exhibitions held throughout the country, forwarded to us. In several instances, however, the names of the persons winning prizes were only given, and not the names of the flowers ; from the first of our commencing the Floricultural Cabinet we have refused to insert such accounts, not having in them anything to benefit our readers. Where the names of the flowers are given we consider it of interest and value, inasmuch as it shows which kinds are most superior for the desired purposes, especially with what are usually termed Florist's flowers, such as Dahlias, Carnations, Pinks, &c.

HULL AND EAST RIDING FLORAL AND HORTICULTURAL SOCIETY.—This Society held their fifth exhibition on the 15th of August at the Public-rooms, Jarratt-street. The flowers possessed most superior excellence of quality ; the piccotees upon yellow grounds surpassed everything hitherto exhibited in this place, particularly the pans shown by Dr. Horner, and Mr. H. S. Norman. The plants, by Mr. Simon Appleton, gardener to Avison Terry, Esq., merit great praise. A pan of Seedling Carnations and Piccotees, raised by Dr. Horner, and bloomed this season for the first time, were of superior quality, and many of them offer as first-rate flowers. A stand of very beautiful and rare flowers were exhibited by Messrs. Forsyth and Ward, of Anlaby, as also a fine tray of splendid Panzies, all from their nursery. The whole exhibition was most pleasing and gratifying to the numerous visitors, and reflected great credit to the members of the Society.

The following is a list of prizes, and to whom awarded :—

Premium by Joseph Sykes, Esq.—Carnations.—Dr. Horner, Ely's Lovely Ann ; Ditto by J. C. Parker, Esq. ; Dr. Horner, Horner's Judith Ann ; ditto by Mr. Wm. Burstall ; Dr. Horner, Ely's Mango ; ditto by a friend, Dr. Horner, Ely's Lord Milton.

Pink Bizarre—1. Dr. Horner, Ely's Lord Milton ; 2. Mr. Burman, ditto ; 3. Dr. Horner, Paul Pry ; 4. and 5. ditto, ditto ; 6. Mr. John Hodgson, Ely's Lord Milton.

Scarlet Bizarre—1 and 2. Dr. Horner, Ely's jolly Dragoon ; 3. Mr. Oglesby, Ditto ; 4. Dr. Horner, Seedling, 1839, Horner's Thunderbolt ; 5. and 6. Mr. Burman, Ely's Jolly Dragoon.

Purple Flake—1. Dr. Horner, Ely's Mango ; 2. Ditto, Lancelle's Queen of Sheba ; 3. Ditto Turner's Princess Charlotte ; 4. Ditto Leighton's Bellerophon ; 5. Mr. John Hodgson, Ely's Lady Hewley ; 6. Mr. Burman, Ely's Mango.

Pink or Rose Flake—1 and 2. Dr. Horner, Ely's Lovely Ann ; 3. Mr. Burman, Ditto ; 4. Dr. Horner, Ditto ; 5. Mr. Burman, Ely's Miss Molly ; 6. Dr. Horner, Seedling, 1839.

Scarlet Flake—1. Dr. Horner, Wilson's William the Fourth ; 2. Mr. Burman, Cheshire Hero ; 3. Dr. Horner, Seedling, 1839, Horner's Firefly ; 4 and 5. Ditto, Wilson's William the Fourth, 6. Mr. Burman, Taylor's Festival.

Self—1. Dr. Horner, Horner's Judith Ann ; 2. Ditto, Seedling, 1839, Horner's Miss Fanny ; 3. Mr. Burman, Purpurea ; 4. Ditto, No. 145 ; 5. Dr. Horner, Seedling, 1839 ; 6. Mr. Burman, Beauty.

Piccotees—Premium by William Lowthrope, Esq. ; Dr. Horner, Hemmingford Beauty ; Ditto by William V. Norman, Esq. ; Dr. Horner, Seedling, 1839, Horner's Dewdrop ; Ditto, by Dr. Horner, for the best Pan of Yellow. —Piccotees, not less than six, Dr. Horner.

Purple-edged or Striped—1. Dr. Horner, Seedling, 1839. Horner's Dew-drop ; 2. Mr. Burman, Ely's Dr. Horner ; 3. Mr. Bell, Wood's Agrippina ; 4. Mr. Burman, Star of Brunswick ; 5. Dr. Horner, Hufton's Miss Willoughby ; 6. Ditto, Ely's Vanquisher.

Red Scarlet, or Pink edged or Striped—1. Dr. Horner, Hemmingford Beauty ; 2. Ditto, Hogg's Miss Campbell ; 3. Ditto, ditto ; 4. Ditto, Ely's Criterion ; 5. Ditto, Geddin's Miss Desbrough ; 6. Ditto, Hemmingford Beauty.

Yellow Ground edged or Striped—1. Dr. Horner, Rosalie de Rohan ; 2. Ditto, Princess ; 3. Mr. H. S. Norman, Ugolina ; 4. Dr. Horner, Ariel, 5. Ditto, Rosalie de Rohan ; 6. Dr. Burman, Barron's Queen Adelaide.

Yellow Self—1. Mr. H. S. Norman, No. 1. 2. Ditto ; 3. Dr. Horner, Golden Drop ; 4. Ditto, Goldfinch ; 5. Mr. Burman, No. 1 ; 6. ditto, No. 1.

A NATIONAL ARBORETUM.—We have been informed that a National Arboretum is about to be planted in the New Forest, Hampshire, by Mr. Page of Southampton.

The ground being national property is under the direction of the commissioners of Woods and Forests. It will be situated about two miles from Lyndhurst.

CONDUCTOR.

A SUBSCRIPTION BOTANIC GARDEN—is in contemplation, by taking a considerable quantity of the grounds at White Knights. Of the specimens of rare trees and shrubs, in what is termed the wilderness, many of them, are unequalled in this country.

ROYAL BOTANIC SOCIETY.—The ground at the circle Regent's Park is in rapid progression for its object. A charter of incorporation has been granted to the society "for the promotion of Botany in all its branches, and its application to medicine, arts, and manufacturers ; and also for the formation of extensive botanical and ornamental gardens." President: the Duke of Richmond ;—Treasurer: Mr. Majoribanks—Council: the Duke of Norfolk, Earl of Albermarle, J. Rushbrook, P. Barnes, and J. C. Sowerby, Esqrs.

ON INCREASING THE NUMBER OF FLOWERS ON THE CHINESE PRIMROSE.—When the first flowers appear in autumn pinch them off, this induces a more vigorous and numerous production to follow ; I have practised this mode of treatment for the last two years with astonishing success.

A. A.

ON INDIAN BOTANY.—The name of Dr. Wallich is familiar to every botanist in this country, as having been a most indefatigable collector of Indian plants. After the death of Dr. Ruxburgh, Superintendent of the Calcutta Botanic Garden, Dr. Wallich took the management of it, and by his skill and activity aided by the East India Company, the garden has attained a high degree of prosperity ; upwards of three hundred Gardeners and workmen are attached to it. Numerous travellers are employed by the Company, to traverse, the extent of the country subject to its domination, with a view to add to the collection of plants, and which have considerably enriched the science of Botany by numerous discoveries. Dr. Wallich, has commenced the publication of two works, on the vegetables and flowers of India, the latter contains colored figures of the rarest plants of Asia. During the last fifty years the Company have collected an immense quantity of dried specimens (from seven to eight thousand) which have been sent to London and preserved in the Company's Museum. Through the liberality of a recent decision, the court of Directors has instructed Dr. Wallich to distribute the valuable collection among the principle botanists of Europe, at the same time taking suitable measures to insure their publication for the benefit of the country. The distribution has commenced, and we are confident the friends of science will highly estimate this act of extensive liberality.

All the species are arranged under their different families, and each family is sent to the Botanist who has given proof of his peculiar fitness for its examination. Mr. G. Benthams the Caryophyllea and Labiateæ; Dr. Lindley the Roseaceæ; Mr. De Candolle the Umbellifera, Caprifoliaceæ, Lorantheæ &c; M. A. De Candolle the Campanulaceæ; And M. Choisy the Convolvuli. Each of these gentlemen receives the first disposable duplicates in the portion confided to him, and is to make them known to the Public. The other specimens are to be divided into collections and distributed into the different countries, so as to prove most efficient in extending a knowledge of the Botany of India.

NEW PLANTS.

LONDON HORTICULTURAL SOCIETIES GARDEN.—The first portion of the very splendid conservatory is rapidly progressing, it is glazed, and the interior in a very forward state. It has the advantage of a greater portion of light than any other erection of the kind we ever saw; its construction, elegance, and utility are admirably combined. The portion now in progress forms the west wing of what is ultimately to have attached a circular centre, and an east wing. The length of the west wing is one hundred and eighty-three feet, in breadth thirty feet, and height to the centre of the roof thirty-two feet, forming already a necessary and valuable appendage to the gardens, and we hope the liberality of those gentlemen who have duplicates of new and fine plants, will be extended to furnish it well at an early period. We were much gratified on examining the plants trained against the south wall of the arboretum, several, which are usually grown in the greenhouse, we found growing and flowering freely against the wall.

A plant of *Lycesteria Formosa* had extended five feet high, and spread widely, it had numerous heads of flowers, the red, purple, and whitish calyxes producing a very pretty effect.

Cercis Siliquastrum.—We saw in May and June, clothed with thousands of its lovely rose colored blossoms, this plant covering the wall to a great extent, and now appearing like a large trained fig tree destitute of its foliage, it is now, November, loaded with seed, which gives it an interesting appearance. The plant deserves a place wherever it can be introduced, its charming blossoms somewhat the form of those of *Rose Acacia*, but not on long racemes, it has a most beautiful appearance when in bloom. The tree grows rapidly.

Brugmansia Sanguinea.—Several plants had extended some distance, and were then in fine bloom.

Solanum laciniatum.—This was nine feet high, equally extended; its fine stags horn looking foliage giving it an attractive appearance. The flowers are tolerably sized of a pretty lilac, and are succeeded by fine red fruit having the appearance of good sized capsicums.

Physianthus Albicans.—This plant extended ten feet high by ten broad; the foliage is very pretty, the flowers are white, much the appearance of those of a *Syringa*; these are succeeded by large green fruit, each about four inches long and three in diameter. It blooms profusely, and is a liberal fruit bearer. It merits a place wherever practicable.

Lavatera Trilobata.—Extending nine feet by nine, its fine rosy pink flowers (each about three inches across) giving it a very showy and beautiful appearance.

Ceanothus azareus, *C. azareus palligus*.—The former with its numerous and beautiful blue heads of flowers; and the latter with those nearly white were objects of attraction. The plants are neat and rapid in growth, free in blooming, showy and handsome, and ought to be grown wherever they can. Description of many more will be given in our following numbers. A temporary construction, for covering the plants, was erected; a wooden coping extended a foot from the wall, with sloping supporters in front, against which canvass, or woollen netting can be spread, as found necessary.



Geranium *Sp. a. Schimper*



Trichium Linanthus



Portulaca grandiflora var. *rutila*

REFERENCE TO PLATE.

ERYSIMUM PEROVSKIANUM.—Orange flowered Treacle Mustard. This very handsome and ornamental plant is said to be a native of Persia. Seeds of it were sent to the Edinburgh Botanic Garden in 1838. Lady Mary Cathcart, of Cathcart, received seeds of it from Caboul, and with them a statement that it was a native of Persia. Her Ladyship has observed upon it, that when grown in pots the plants are weak, but when in the open border they are vigorous as the common wall flower, and produce numerous heads of flowers in succession. We have seen it grow in the open borders in vast profusion in the garden of the London Horticultural Society, and there it produced a fine effect. The plant appears to be annual, seeding abundantly, and self sown, produces a host of plants around it, similar to the well known Candy Tuft. The plant grows about half a yard high, with numerous shoots each having a fine spike (some near a foot long) of its showy blossoms. It deserves a place in every flower garden or border, as it blooms freely, is very showy, and continues for several months in bloom. We have procured a stock of it.

FUSCHIA CHANDERII.—This very striking kind has been raised by Messrs. Chandlers of the Vauxhall Nursery, London. It is a production between *Fuchsia Fulgens* and one of the older kinds, probably *globosa*. The seed was from the latter. It is stated by persons who have had ample means of ascertaining, that *fuchsia fulgens* impregnated by the other kinds produces plants with flowers similar to the small kinds, but the smaller kinds impregnated with *fulgens* produces plants having flowers partaking of the form and colour of the latter.

PORTULACCA GRANDIFLORA RATILA. This appears to be a variety raised from *grandiflora* impregnated with (probably *P. Gillesia*) some other. It is a very beautiful flowering plant, well meriting a place in every flower garden during summer, or to be kept in pots in an airy greenhouse. The plant, like the other kinds, is difficult to keep through winter, frequently dying off by being kept too damp; it requires to be planted in pots with a good deal of drainage, and be placed high in the centre of the pot, and with any common care may then be easily kept.

 FLORICULTURAL CALENDAR FOR DECEMBER.

PLANT STOVE.—Roses, Honeysuckles, Jasmines, Persian Lilacs, Azaleas, Rhododendrons, Carnations, Pinks, Primroses, Mignonette, Stocks, Aconites, &c. required to bloom from January, should be brought in early in the present month, the plants should be placed at first in the coolest part of the house, never allow them to want water. Pots or boxes containing bulbous rooted flowering plants as Hyacinths, Narcissuses, Persian Irises, Crocuses, &c., should occasionally be introduced so as to have a succession of bloom. All stove plants will require occasionally syringing over the top in order to wash off any accumulated dust from the foliage. Cactus plants that have been kept out of doors or in the greenhouse, should occasionally be brought into the stove for flowering, which gives a succession. If any of the forced plants be attacked with the green fly, a syringe with diluted Tobacco water will destroy them. If the leaves appear bit, and turn brown the effect of damage by red spider, a syringe of soap suds at the under side of the leaves is effectual to destroy them. The glutinous substance remaining not only kills those it is applied to but presents others returning there.

GREENHOUSE.—As much fire as will barely keep out frost will be necessary and for the purpose of drying up damp arising from foggy nights, or from

watering ; all possible air should be admitted in the day time, but mind to keep the plants from damage of frost. Chrysanthemums will require a very free supply of air, and a good supply of water. By the end of the month many will be going out of bloom, such should be cut down and if any kind be scarce, the stalks may be cut in short lengths and be struck in heat, always cut the lower end of the cutting close under the joint. If greenhouse plants require watering, or syringing, over the tops, let it be done on the morning of a clear day when air can be admitted, and towards evening a gentle fire heat should be given.

FLOWER GARDEN.—Be careful to protect beds of, what are technically called, Florist's Flowers, should severe weather occur. Calceolarias that were cut down and repotted last month will require attention, not to water too much or they will damp off, keep them in a cool and airy part of the greenhouse or pit. Whilst in a cool and moist atmosphere the shoots will often push at the underside numerous rootlets, where such are produced the shoots should be taken off and potted, they make fine plants for next season, and are easier propagated now than at any other season.

Auriculas and Polyanthuses will require plenty of air in fine weather, and but little water ; the like attention will be required to Carnations, Pinks &c., kept in pots. Dahlia roots should be looked over to see if any are moulding or likely to damage, let the roots be dry before they are laid in heaps. Newly planted shrubs should be secured, so that they are not loosened by the wind. The pots of Carnations and Piccotees should be placed in a situation where they may have a free air, and be raised above the ground ; if they are under a glass case, it will be much better than when exposed to the wet and severity of the winter, or many will, in all probability, be destroyed. Where it is desirable to leave patches of border flowers undistributed, reduce them to a suitable size by cutting them round with a sharp spade. When it is wished to have a vigorous specimen, it is requisite to leave a portion thus undisturbed. Ten week stocks, and mignonette, in pots for blooming early next spring to adorn a room or greenhouse, must not be overwatered, and be kept free from frost. A cool frame, well secured by soil or ashes at the sides and plenty of mats or reeds to cover at night will answer well. Tender evergreens newly planted, would be benefited by a little mulch of any kind being laid over the roots. During hard frosts if additional soil be required for flower beds, upon grass lawns, advantage should be taken to have it conveyed at that time, so that the turf be not injured by wheeling.

AN ALPHABETICAL INDEX

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